August 5 - 9,2002



California-Arizona Consortium NIEHS Grant

Occupational & Environmental Management UC Davis Extension

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UC DAVIS EXTENSION
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1333 RESEARCH PARK DRIVE DAVIS, CALIFORNIA 95616-4852

DESIGNING & DELIVERING EFFECTIVE HEALTH & SAFETY TRAINING

This course is offered through a grant funded by the National Institute of Environmental Health Sciences (NIEHS) to the California-Arizona Consortium. The Consortium has been funded to help provide training which meets various requirements of 29 CRF 19 10.120, the Hazardous Waste and Emergency

You have the health and safety knowledge, but do you have the skills to train others effectively? In this five-day course learn how to design, develop and deliver workplace health and safety training programs and use a wide range of instructional methods. Learn various approaches to instruction, including participatory techniques, tips for engaging your specific audience, facilitated discussions and small group activity method. Topics include: Adult learning principles, assessing audience needs, course development, instructional methods, presentation techniques, and evaluation and feedback.

ELLENE RIFAS, RN, EDD

Ellene Rifas is a trainer and consultant with Alliance For Learning and has 25 years of experience working with organizations.

UC DAVIS EXTENSION

Janis Heple, program director Karryn Doyle, program assistant Nathan Sands, program assistant

Occupational and Environmental Management 1333 Research Park Drive, Room 271 Davis, CA 95616 (530) 757-8878 BERKELEY • DAVIS • IRVINE • LOS ANGELES • MERCED • RIVERSIDE • SAN DIEGO • SAN FRANCISCO



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OCCUPATIONAL & ENVIRONMENTAL MANAGEMENT GRADING POLICY

This course is offered for academic credit, and students are evaluated by a formal process (e.g., exam, term paper or take-home assignment).

- 1. All coursework is due on the date specified by the instructor. Late work <u>will not be accepted</u> and may result in a failing grade. No work will be accepted after the last day of class.
- 2. We strongly recommend that you make a copy of all assignments, papers or exams for your records, before mailing them to instructor or University Extension.
- 3. The grading option for the course is established by the program and is not subject to students' choice. The courses are approved for either a letter grade or pass/no pass. Within these categories, the specific grades awarded include:

<u>Letter Grade:</u>*

<u>Pass/No Pass:</u>

A = excellent C = fair F = fail P = passed (grade of "C" or better)

B = good D = barely passed NP = not passed (grade of "D" or lower)

- *To apply a course toward a certificate program at University Extension, UC Davis, you <u>must</u> receive a grade of "C" or better. If you receive a "C-", "D" or "F" in a certificate program course, you will need to repeat the course and receive a grade of "C" or better.
- 4. Other grade designations are as follows:
 - I = incomplete. The grade of "I" may be assigned only when a student's work is of passing quality, represents a significant portion of the requirements for a final grade, <u>and</u> is incomplete for a good cause. Requests for "I" grades must be submitted in writing to the instructor prior to the final assignment due date and are subject to instructor approval. All "incompletes" must be completed within one year of the final assignment deadline, or the grade will automatically convert to a "withdraw" (WD). WDs cannot be changed, even if late work is submitted.
 - **NWS** = **no work submitted.** This grade is automatically given to students who attend the course but do not submit any work by the specified deadline. It is equivalent to a failing grade. It is **not** the same as an incomplete. Grades of "NWS" **cannot** be changed, even if late work is submitted. To receive certificate program credit, the course must be repeated.
 - **NC** = **non-credit.** This option must be requested **in writing** by the student prior to the final assignment due date. You may use the form on the reverse side of this page. Courses in which a grade of "NC" is received **cannot** be applied toward a certificate program.
 - **WD** = withdraw. This option must be requested in writing by the student. Withdrawing from a course does not necessarily result in a refund. Incompletes that are not cleared within one year will automatically convert to a "withdraw."
- 5. Please mail you assignment to the following address (unless your final is due at the last class session): University Extension / UCD, 1333 Research Park Drive Room 271, Davis, CA 95616-4852.

You can expect an official grade report approximately 4-6 weeks after the final assignment due date. Because of University of California confidentially regulations, questions regarding assigned grades should be directed to the Student Services grades clerk at (530) 757-8777. If you have any questions regarding this grading policy, please contact the Occupational & Environmental Management Program at (530) 757-8878.

NON-CREDIT REQUEST FORM

TO:	Registrar University Extension / UCD 1333 Research Park Drive Davis, CA 95616-4852 Fax (530) 757-8558	
FROM:		
	Social Security #:	
SUBJECT:	Request for Non-Credit Grading Option	
I wish to tal	ke the following course non-credit:	
Cours	se title	
Section	on number	
Signed:		Date:
	**************************************	**********
• Ye	our request can be sent by mail or by far	x to the Registrar.
	our request is due in the Registrar's Off ssignment due date (see grading policy of	
*****	***********	*********

COURSE OVERVIEW

- > Welcome and Introductions
- > Course Outline and Objectives
- > Grading Criteria/Final Project
- > Exercise: "Group Resume"
- > Exercise: "One-the-Spot Assessment"

COURSE OVERVIEW

- 1. Identify Target Group/Audience (Consider Adult Learning Principles)
- 2. Conduct Needs Assessment: Learners and Organization
- 3. Select Topic; Write Goals and Learning Objectives
- 4. Design Training & Development Content; Write Lesson Plan
- 5. Select Instructional Methods
- 6. Develop Instructional Materials and Visual Aids
- 7. Deliver Presentation

8. Evaluate Training: Learners and Organization

(NOTE: Numbers refer to Carina Celeisa Moore's Learner-Centered Training® model)

Learner-Centered Training Model Author: Carina Celesia Moore

Contact Person: Carina Celesia Moore (ccmoore@ucdavis.edu (530) 752-9681)

Day 1: Course Outline

Course Overview

- Welcome and Introductions
- Course Outline and Objectives
- Grading Criteria/Final Project
- Exercise: "On-the-Spot Assessment"
- Exercise: "Group Resume"

Adult Learning

- Exercise: "Brainstorm What We Know About Adult Learners"
- Literacy Issues "Training Methods with Literacy in Mind"
- Learning Styles
- Identify Your Target Group or Audience

Needs Assessment

- Needs Assessment Overview
- Audience Analysis (Assessing The Training Group)
- Exercise: "Conrail Case Study"
- Discussion: Learners and Organizations

Developing Goals and Learning Objectives

■ Goals vs. Objectives

- Writing Learning Objectives
- Exercise: "Select Your Topic: Begin Writing Individual Goals and Objectives"

Summary - Day 1

Day 2: Course Outline

Review Course Outline

Training Design and Development Overview

- Active Learning
- Learner-Centered Training Model ©
- Review Lesson Plan Examples and Resources
- Exercise: "Anatomy of a Lesson Plan"

Instructional Methods Assessment

- Exercise: Brainstorm
 Exercise: Mind Mapping
- Exercise: Handling Problem Situations
- Exercise: Small Group Activity Method (SGAM) "Toxic Myths"
- Other Methods: Lecture, Facilitated Discussion, Role Play, Games, Demonstration

Instructional Materials and Visual Aids

- Easel Charts: How to Use Charting Effectively
- Presentation Technology: Important Considerations
- Handouts: Important Considerations
- Exercise: Creating Visual Aids

Lesson Plan Workshop

■ Independent designs and individual consultations

Summary - Day 2

Day 3: Course Outline

Review Course Outline

The Art of Delivering a Presentation

■ Behavioral Skills that Facilitate Effective Interpersonal Communication

Evaluation of Training Programs

- Review: Learner-Centered Training Model @
- The Art of Giving and Receiving Feedback
- The Four Levels of Evaluation
- Examples of Evaluation Forms

Planning For Lesson Presentations

- Review Presentation Format
- Review Presentation Schedule
- Establish "Group Norms"

Presentation Workshop

■ Independent Designs and Consultations

Summary - Day 3

Day 4: Course Outline

Review Course Outline

Lesson Presentations and Feedback

- Review of Presentation Schedule
- Review Feedback Form
- Individual Presentations

Summary - Day 4

Day 5: Course Outline

Review Course Outline

Lesson Presentations and Feedback

- Review of Presentation Schedule
- Review Feedback Form
- Individual Presentations

Course Summary

- ■Taking Care of Business (Grades, etc.)
- Learner-Centered Training Model @
- Review Course Objectives
- Course Evaluation

■ Active Learning Credo

COURSE OBJECTIVES

By the end of this 40-hour course, DESIGNING AND DELIVERING EFFECTIVE HEALTH AND SAFETY TRAINING, participants will:

- 1. **Be introduced** to several instructional methods including:
 - Facilitated Discussions
 - "Warm-up" Activities
 - Small Group Activity Method (SGAM)
 - Brainstorming
 - Case Study Method
 - Mind Mapping
 - "Help/Hinder" Evaluation
- 2. Participate in several active training exercises
- 3. Read and review articles and materials regarding:
 - Adult Learning Principles
- Preparing Presentations/Lessons
- Needs Assessment
- Preparing Visual Aids
- Instructional Methods
- Handling Problem Situations
- Adult Literacy Issues
- Evaluating Training Programs
- 4. Write learning objectives for a lesson plan
- 5. Design, write and deliver lessons/presentations
- 6. Write an Individual Instructional Method Anthology
- 7. Give and receive objective behavioral feedback
- 8. Review evaluation methods of training programs
- 9. Appreciate the gifts, strengths, and diversity of one another in the roles of trainer, facilitator and learner

GRADING CRITERIA

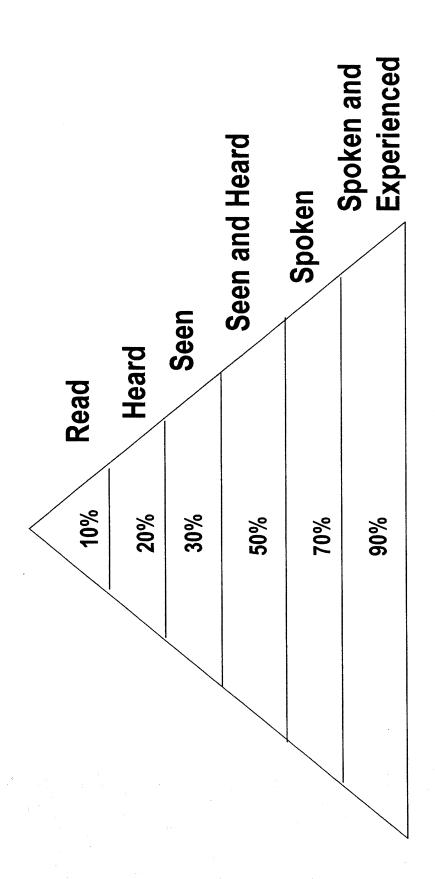
•	In-Class Participation/Exercises	30	%
•	Individual Instructional Method Anthology	20	%
•	Lesson Objectives and Lesson Plan	25	%
•	Presentation of Lesson (the "test")	<u>25</u>	%
		100) %

NOTE: All written work is due at the last day of class!

Student Name:				
GRADING CRITERIA				
In-Class Participation/Exercises	30 %			
 Individual Instructional Method Anthology 	20 %			
 Lesson Objectives and Lesson Plan 	25 %			
 Presentation of Lesson (the "test") 	25 %			
YOUR GRADE In-Class Participation/Exercises	-			
Individual Instructional Method Anthology				
 Lesson Objectives and Lesson Plan 				
 Presentation of Lesson (the "test") 				
FINAL GRADE				

Designing and Delivering Effective Health and Safety Training NAME: In-Class Participation/Exercises 30 % 20 % Individual Instructional Method Anthology Lesson Objectives and Lesson Plan 25 % 25 % Presentation of Lesson (the "test") FINAL GRADE: Instructor: Date:

Training/Learning Retention





Individual Instructional Methods Anthology "Keepers"





Individual Instructional Methods Anthology "Keepers"





Individual Instructional Methods Anthology "Keepers"



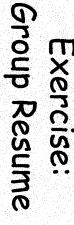
Carina Celesia Moore Consulting

Project Final

Designing and Delivering Effective Health and Safety Training

- Written Lesson Plan includes:
- l Use categories as appropriate
- Behavioral objectives
- Instructor notes/directions
- l Word process, if possible
- Delivery of Lesson Plan/Presentation: Maximum of 1 minute of framing
- Use visual aids
- Infuse with interaction
- At least one method other than "lecture.
- Consider: deliver, demonstrate, practice, "test"
- □ Stay within allotted time

Course Overview



- Purpose: To get to know one another better (Ice Breaker).
- Form small groups.
- Discuss and chart collective "Group Resume":
- Education # of years
 H&S field # of years
- Instructor # of years
 Positions held
- Professional skills/expertise
- Hobbies, talents, interests

Course Overview

What are your - Expectations Questions or concerns - Goals



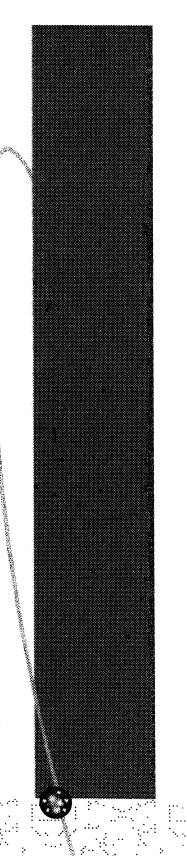
Active Learning Credo

(Active Learning, Mel Silberman,1998)

- When I hear, I forget.
- When I hear and see, I remember a little.
- When I hear, see and ask questions begin to understand. or discuss with someone else, I
- acquire knowledge and skill. When I hear, see, discuss and do, I
- When I teach to another, I master.

ADULT LEARNING PRINCIPLES

- Exercise: Brainstorm "What We Know About Adult Learners"
- > Learning Styles
- Literacy Issues: "Training Methods With Literacy In Mind"
- > Identify Your Target Group/Audience



Brainstorm:

about adult learners? What do we know

Literacy Objectives

By the end of this session, you will be able to

- Review recent statistics about literacy in US.
- training to reach participants at all Describe 3 ways to adapt your reading levels.
- information in your work as a trainer. Recognize one way you could use this

Literacy - Small Group Activity

someone in your family or about someone you know where literacy With a partner, talk about an experience or story about was an issue.

Literacy Quiz

This short quiz will give you an idea of what you already know about literacy. We also hope that it will provide you with additional information about how issues of literacy may apply in health and safety settings. Please circle the correct answer for each question.

- 1. The percentage of adults in the United States that have difficulties with basic literacy tasks is:
- a. 6% (about 11 million)
- b. 17% (about 32 million)
- c. 48% (about 90 million)
- 2. The reading level of most educational materials that people receive at their jobs is often:
- a. between 6th 8th grade reading level
- b. between 9th 12th grade reading level
- c. at college reading level
- 3. Material Safety Data Sheets (MSDSs) are often written at a:
- a. 8th grade reading level
- b. 10th grade reading level
- c. college reading level
- 4. What are some factors contributing to adults having reading and writing difficulties?
- a. environmental factors
- b. psychological factors
- c. educational factors
- d. physical factors
- e. all of the above
- 5. True or False. Grade-level measurements are an accurate way to assess people's literacy skills.
- a. True
- b. False

What do you know about your learners?

- In groups of 3-6, list on a chartpad the characteristics of your group of learners
- What types of things do you need to consider when putting together a H&S program, e.g., cultural, literacy, or time issues?

Adapting Training

- training to reach participants at all reading levels (things you could do as What are 2 ways to adapt your a trainer)?
 - questions to do in advance or at the beginning of training that might help What are 1 or 2 needs assessment you learn more about the "literacy needs" of your audience?

Adult Learning: What Do We Know For Sure Training Magazine, June 1995 Pgs: 31-39

Authors: Ron Zemke, Susan Zemke

Training for Trainers, Teaching the Adult Learner
Pacific Mountain Review, vol. 12, #3; ISBN07381867; 916-447-2854.
Pgs: 1-8

Author: Richard Dreher, Rural Community Assistance Corporation

Ten General Principles of Learning
AFL-CIO Department of Education: "A Participant's Handbook for a Train-the-trainer
Program"
Pgs: 83-84

Author: Canadian Labour Congress Contact Person: Helen from CLC (613-521-3400 ext: 218)

The Right to Understand

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Missiala Genzellaz Arrenyo



Leien Occupational Health Rocton

To Sum Up:

- Current statistics suggest that one-third to one-half of U.S. workers have difficulties with reading and writing.
- Avoid making assumptions about workers' literacy skills based on years of education.
- Literacy definitions and statistics are changing.
- Injury and illness rates are increasing, making health and safety communication more important than ever.
- It's the employer's legal responsibility to train workers about chemical hazards on the job, regardless of literacy level.
- Most health and safety materials are written at a college reading level.
- Many U.S. workers have difficulty reading current health and safety materials.
- Technical training materials that are full of jargon miss the mark. We must find other ways to present written information.
- We can't afford to let literacy barriers get in the way of educating workers.

Tips for Training



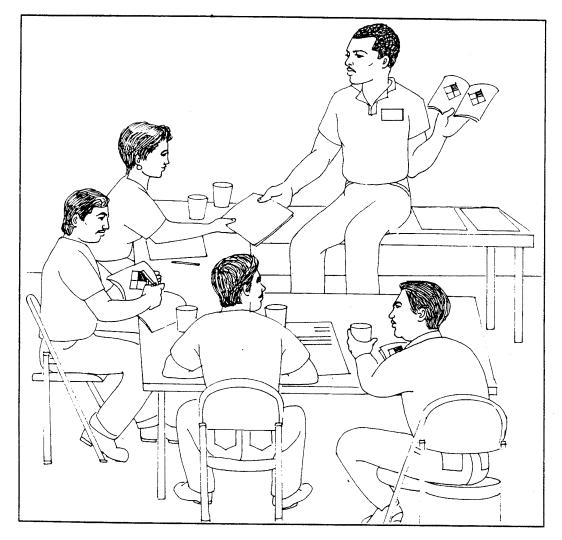
"If the trainer says, 'You're not going to have to read aloud in this training,' I can relax."

—Joe, Supervisor

The following suggestions are designed to help you adapt your training techniques to reach participants at all reading levels. We have compiled the list with help from health and safety trainers as well as workers who have reading and writing problems.

- At the beginning of the session, introduce yourself. Mention that you are aware people in the group may have different levels of reading and writing skills.
- Make it clear that you won't put people on the spot. Let them know that you are available during breaks to talk about this or other concerns.
- Let the group know that they will not necessarily be expected to read material by themselves during the training.
- Let people know that you won't be asking them to read aloud.
- If materials must be read aloud, read them yourself or ask for a volunteer. Keep this in mind during the entire class, including tests and exercises.

- Read all instructions aloud. Don't rely on written instructions or checklists as the only way of explaining an activity or concept.
- Make sure your handouts are easy to read and visually appealing. Give out only the most important written material. Make any other materials available as an option.



- Explain any special terms, jargon, or abbreviations that come up during the training.
- If participants have to write, post a list of key words. This can serve as a resource for people with writing or spelling difficulties.

continued

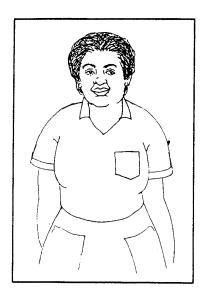
- If someone has to write on a flipchart in front of the group, always ask for volunteers. Don't embarrass anyone by calling on him or her to write.
- Organize small groups of people to do exercises together. Set up your groups to include a volunteer reader in each one.
- Use visual aids, props and real-life examples in all your teaching strategies. Don't depend on people's literacy skills.
- Be sensitive about literacy issues. If you observe someone having trouble reading and writing, don't embarrass the person by mentioning it in front of the group. Instead, check in privately at your first opportunity.
- Frequently ask how the training is going so far. Seek advice on how you can make the course a success.



"We always say, The rules you had to go by in school can be broken here. We encourage sharing answers and working with others."

— Joan, Trainer

Defining Participatory Training



"Give me a chance to practice.
That's the best way of learning for me. If I can see it and understand it, I'm sure I can do it."

—Alberta, Nurse's aide

Participatory training methods draw on participants' own experiences. They encourage teamwork and group problem solving. Participants get the opportunity to analyze health and safety workplace problems in a group and develop solutions. There can also be valuable exchanges between workers and trainers about their lives and their work.

Participatory methods work particularly well with people who have reading and writing difficulties. Participatory methods:

- Draw on participants' own knowledge and experience about health and safety issues.
- Emphasize "learning through doing" without relying on reading.
- Create a comfortable learning experience for everyone.

Samples of Participatory Methods

The following section offers a brief overview of nine participatory training methods.

- Ice-breakers
- Risk maps
- Role playing
- Games
- Small group exercises
- "Trigger" visuals
- Brainstorming
- Demonstrations and hands-on activities
- Participatory lectures.

For each method, we include:

- A sample training activity (identified by a vertical bar on the outer edge of the page).
- A checklist of advantages and disadvantages.
- Tips for using the method with literacy in mind.

To Sum Up:

- Be sensitive about literacy issues in a training session. Check in privately with anyone having reading and writing difficulties.
- Make it clear that, you won't put people on the spot. Ask for volunteers to read aloud or write in front of the group.
- Use many different participatory training activities.
 - Ice-breakers
 - Risk maps
 - Role playing
 - Games
 - Small group exercises
 - "Trigger" visuals
 - Brainstorming
 - Demonstrations and hands-on activities
 - Participatory lectures
- Adapt your training activities to reduce reliance on literacy skills:
 - Read everything aloud.
 - Use visual aids and props.
 - Encourage teamwork.
 - Draw on workers' own knowledge and experience.
 - Say aloud anything that you write on a board or flipchart.
 - Try to avoid jargon or abbreviations.

Experiment with New Methods and Approaches



"One of the most interesting things I've learned is that even highly literate workers prefer visually appealing materials and participatory training activities. Literacy awareness has forced us to become better writers and more creative trainers."

—Diana, Trainer

Make a commitment to try some of the activities, strategies and approaches described in this manual:

- Learn more about the reading and writing skills of your training audience. Ask people how they learn best. Get their suggestions about materials and activities that would work for them.
- Hold focus groups with your audience. Ask workers for feedback on your current training materials and activities.
- Field test new materials with participants who have a range of literacy skills. Adapt your materials if necessary.

- Try a new participatory activity in your next training course.
- Experiment with alternative ways to assess skills.
- Share with other trainers any materials and training activities you develop. Consider holding a meeting with other trainers in your area. Regional or national meetings can also be a good way to make connections with other health and safety trainers.



Learning Styles:

Types

LEARNING THEM



Auditory:

like to have things explained to them, rather listen to a story than look at pictures while being read to, like the sounds of words



Visual:

like things presented in pictures or diagrams, translate what a they hear into visual images, talk using visual figures of speech, doodle while listening may assist with memory more than words



Kinesthetic

want to feel action in their bodies before they're sure they understood a new concept, express themselves well through gesture, dance or posture, often "street wise" and do well in sports, well coordinated, skillful with their hands and good at using tools, rather do than talk



Print-Oriented:

love to read and store ideas from printed page easily, rather read the book than see the movie, prefer reading about things than have it explained, easily remember what they read and can verbalize it well: by either repeating it back or writing it on a test



Group-Interactive:

learn best when involved in discussions and/or other activities they require participation of others, like to exchange ideas, if they are not outputting as well as inputting they may fall asleep, understand things after experiencing them as part of group process, likely to the more from a dinner conversation than a formal class

THE WE PEDPLETION

Learning Styles

Strengths/weaknesses



Strengths:

Weaknesses:

•Does well in a traditional classroom

Ability to to think

•Risk confining their learning to the limits of words alone



creatively

•Risks being seen as inattentive e.g. doodling



•Bring a greater sense of connection with their bodies

•Risks being seen as restless or hyper



Kinesthetic



•Ability to absorb knowledge from source

•Because print is so linear, risk is in the mind is lured into exclusive linear thought patterns

Print-Oriented:

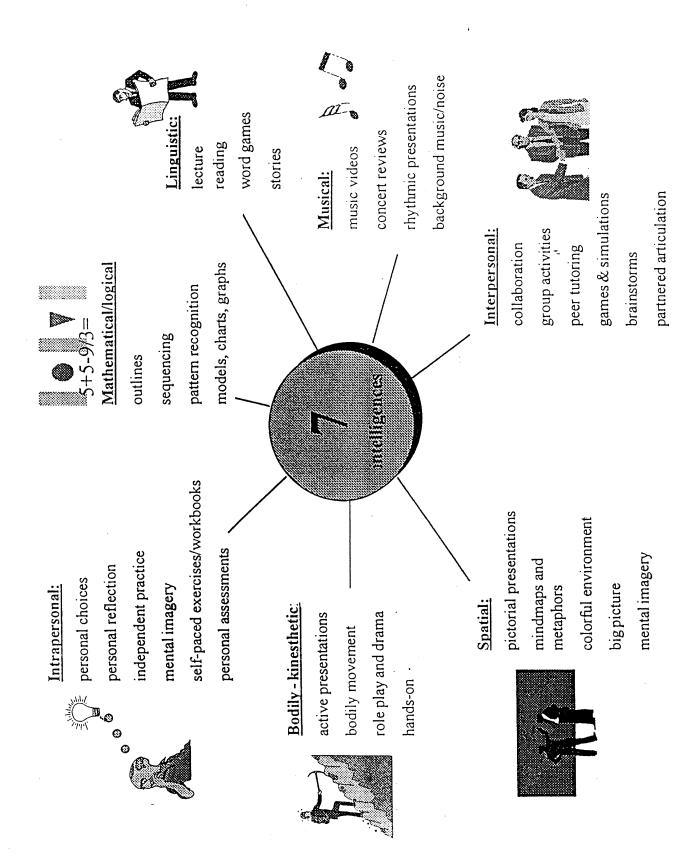


•Freely exchange ideas

•Risks key learnings being steered by the group

Group-Interactive:





National Adult Literacy Survey: Half of U.S. Adults Lack Skills

bout 50 percent of adults in the United States have low literacy skills. That's 90 million people. The number comes from a recent study by the Department of Education. The National Adult Literacy Survey (NALS) became public on September 8.

The NAL Survey is different from past studies. It defines "literacy" in a new way. Adults were tested on their ability to perform everyday types of tasks. The tasks required different levels of skills, such as reading, math, and problem-solving.

More than 26,000 adults were tested. They included people from all the states and from prisons. People of both sexes, all races, and different economic and education levels took part.

More than 21 percent of the adults performed at the lowest level. Some of them could locate the time and place of a meeting on a form. Others could find a basic fact in a news story. Many could not.

At least 25 percent of the adults tested at the second lowest level. Their skills were better, but still limited. For instance, they could total up the cost of a purchase or find something on a street map.

Based on this study, about half the adults in the U.S. perform at levels one or two. That means they are likely to have trouble with complex tasks. They can't do high-level reading or problem-solving.

The study suggested why so many adults performed at low levels. Many had just come to the U.S. and were learning to speak English. Most had not finished high school. Others had health or sight problems that affected their skills. One third were age 65 or older. In general, these older adults had completed fewer years of school. Many adults in prison had low literacy skills, too.

These adults did not think of themselves as "at risk." Many said they were able to read and write English "well" or "very well."



Pat Blackwell of Indiana presents Madeleine Kunin with a t-shirt. Blackwell is a new reader member on the Congress Planning Committee. Kunin is the Deputy Secretary of Education.

The study showed a strong link between literacy and money. People with higher skill levels were more likely to have jobs. They worked more hours and earned higher wages. Nearly half of all adults in the two lower skill levels were living in poverty.

Voting was another topic covered in the study. Only half the adults in level one had voted in the last five years. But, nearly 90 percent of the highest skilled adults had voted.

Not all of the study's results agreed with each other. Many of the adults with low skills had good-paying jobs and active lives. Many with high skills were jobless. Overall, though, the study found this: People with limited literacy skills are likely to have trouble pursuing their goals.

The study called for many groups to solve the problem together. "Programs that serve adult learners cannot be expected to solve the literacy problem alone," it said. "Neither can the schools." Government, businesses, and families must each play a role. Each person must come to value literacy in his or her life, the study said.

Designing and Delivering Effective Health and Safety Training

NEEDS ASSESSMENT

- > Needs Assessment Overview
- > Audience Analysis

- > Exercise: Conrail Case Study
- > Discussion: Learners and Organizations

Needs Assessment Techniques

- Observation
- Questionnaires
- Key Consultation
 - Print Media
 - · Interviews
- Group Discussion
- Tests
- · Records, Reports
- Work Samples

Assessing the Training Group

Information Desired:(che	ck as many as desired)	
participants' stated r	needs	
the nature of the par	ticipants' work or personal s	ituations
participants' skills		
participants' knowled	dge	`.
participants' attitude	S	
conditions affecting	participant involvement	
Methods desired: (check a	us many as desired)	
observation	print media	tests
questionnaire	interview	records, reports
key consultation	group discussion	work samples
Assessment Outline:		
	·	
Adapted from Silberman & Auer	bach, Active Training, 1990	

Designing Learner-Centered Training

WORKSHEET

Select a target group/audience (e.g., CEO's, People at a Town Hall Meeting, Workers at a Tail Gate Meeting, Factory Workers, Employees in a Manufacturing Plant).
TARGET GROUP/AUDIENCE:
Identify the needs of the target group/audience (e.g., Mandatory Training for Certification, Required training for New Hire Orientation, Employees want to avoid H&S fines, Workers don't believe they have time for training. Employees need to select and learn how to use PPE before going out in the field).
NEEDS:
OTES:

NEEDS ASSESSMENT

Name.
40-Hour Hazardous Waste Worker Health and Safety Training Course
The purpose of this survey is to assist us in tailoring the 40-hour Hazardous Waste Worker cours for which you are enrolled to address your health and safety concerns. Please assist us by filling out this survey in as much detail as possible. All information that you provide is confidential. The more complete your answers are, the more relevant and appropriate we can make the training course. To return the survey, please fax it to us at (916)757-8634, or return the survey in the attached self-addressed stamped envelope. Thank you very much for your assistance. If you have additional questions, please call Janis Heple or Judy Brzyscz at 757-8609.
I. TRAINING
a. How much training in hazardous waste health and safety have you had?
40 hours (5 days)
24 hours (3 days)
8 hours (1 day)
other; please specify length:hours

c. When did you receive your previous training?

b. Who provided this training?

d. Have you had other health and safety training?

On what topics?

2. JOB DESCRIPTION

a. Please describe your routine job tasks in as much detail as possible. Be sure to mention all machinery, equipment, and materials that you regularly work with.
b. Please describe any other duties that you believe may present a hazard or risk to your health (these may be tasks that you seldom carry out.)
c. Are there any accidents or emergencies, involving yourself or co-workers, which have occurred at your worksite within the past 12 months? Please describe:
d. Please describe your greatest health and safety concern:
a violate deserved your greatest health and safety concern.
3. CHEMICAL USE
Please list all chemicals that:
a. You work with regularly:
b. You are occasionally exposed to:

Check all items week, occasiona	ERSONAL PROTECTIVE EQUIPMENT/CLOTHING that apply. For each item, please specify how often you use it (every day, one ally, etc.)
Do you wear an	y kind of protective equipment at work?
Respirator:	
Dust Ma	ask: Half-mask respirator with cartridges:
Full-face	e respirator with cartridges:
Air Suppaparatu	(
Gloves:	
Chemica	d protective suit:
Other (p	please list):
*hazardo *hazardo *the "rig *medical *persona *workers	review health and safety topics required by the OSHA Hazardous Waste Emergency Response Standard (29 CFR 1910.120 or T8 5192), including: ous waste and environmental regulations awareness/control that to know" law I surveillance programs all protective clothing and respiratory protection
This course will Operations and I *hazardo *hazard *the "rig *medical *persona *workers *emerger	review health and safety topics required by the OSHA Hazardous Waste Emergency Response Standard (29 CFR 1910.120 or T8 5192), including: ous waste and environmental regulations awareness/control that to know" law as all surveillance programs all protective clothing and respiratory protection is rights and decontamination instructors focus their information by letting us know 3 things you would like
This course will Operations and I *hazardo *hazard *the "rig *medical *persona *workers *emerger Please help our i	review health and safety topics required by the OSHA Hazardous Waste Emergency Response Standard (29 CFR 1910.120 or T8 5192), including: ous waste and environmental regulations awareness/control that to know" law as a large programs all protective clothing and respiratory protection s' rights and protective and decontamination instructors focus their information by letting us know 3 things you would like

3.

Needs Assessment

 ★ In your small group, read Conrail Case Study Analyze and identify the following:

Conrail Case Study

- What needs assessment technique could they have used?
- What adult learning principles were considered?
- What instructional methods were used?
- How did they promote/create "skills transfer on the job?
- report.

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Conrail cuts the risks Railway Age, April 1998 Author: Harvey B. Lermack

Designing and Delivering Effective Health and Safety Training

GOALS & LEARNING OBJECTIVES

- > Goals vs. Learning Objectives
- > SMART Goals
- Writing Learning Objectives
- Exercise: Select Your Topic; Begin Writing Learning Objectives
- > Exercise: "Help/Hinder" Chart

What is an Objective?

Goals and Objectives

"A statement that describes an instructional outcome rather than an instructional processor procedure. It describes the intended results rather than the means of achieving those results."

Robert Mager,
Preparing Instructional Objectives

Writing Objectives

Upon completion of this _____ (event)

participants/students ____ (people)

will be able to ____ (action, such as the training outcome, behavior, skill).

Writing SMART Objectives

will be able to do WHAT, WHEN (your lesson plan will answer the Effective objectives tell us what the students will be able to do by the end of the training session. SMART objectives tell us WHO HOW).

- Specific
- ✓ Measurable
- ✓ Achievable
- Realistic
- ✓ Time defined

Behavioral Objectives

- Knowledge (recognition and recall)
 - define list name recall record relate state underline
- Comprehension (understanding of the meaning of information)
 - describe discuss explain identify locate - recognize - review - translate
- Application (ability to use information)
 - apply employ interpret demonstrate operate - practice - compute - illustrate

Behavioral Objectives

(Higher Levels)

- Analysis (ability to dissect knowledge into component parts and see their relationship)
 - calculate compare contrast criticize examine question test
- Synthesis (ability to put parts together to form new ideas)
 - collect construct create design formulate organize - plan - propose
- Evaluation (ability to judge the worth of an idea, belief or information)
 - assess choose compare- estimate evaluate judge appraise value

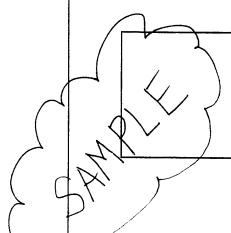
Designing Learner-Centered Training

WORKSHEET

Select one workshop topic that fits the needs of your target group/audience (e.g., "Selecting Eye Protection For The Job," "Labeling Hazardous Materials Containers," PPE For You And Me," HazMat for the Execs").

WORKSHOP TOPIC:

"By the enc (e.g,. "By th PPE for the participant:	s will fit and dor s will identify at	op participant: orkshop partic on on the job." n a respirator.	By the end "By the end	the following for the learning object lect the approprio of this workshop of this workshop dous materials in
	OBJECTIVES of this worksho		will be able 1	·o:
b			` .	
OTES:				



Designing Learner-Centered Training

LEARNING OBJECTIVES

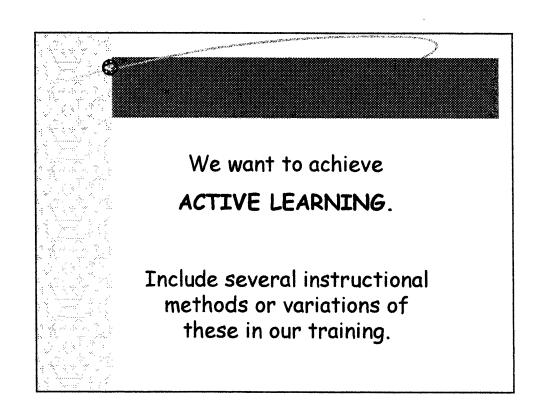
By the end of this workshop participants will:

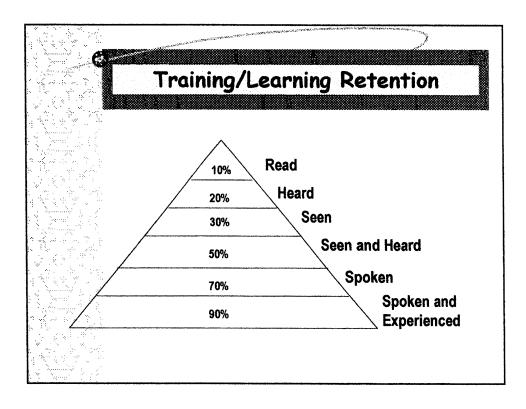
- Take a "guided tour" of the Learner-Centered Training Model
- Discuss target groups/audiences
- Identify potential workshop topics
- Complete a lesson plan worksheet
- Participate in an on-the-spot evaluation

Designing and Delivering Effective Health and Safety Training

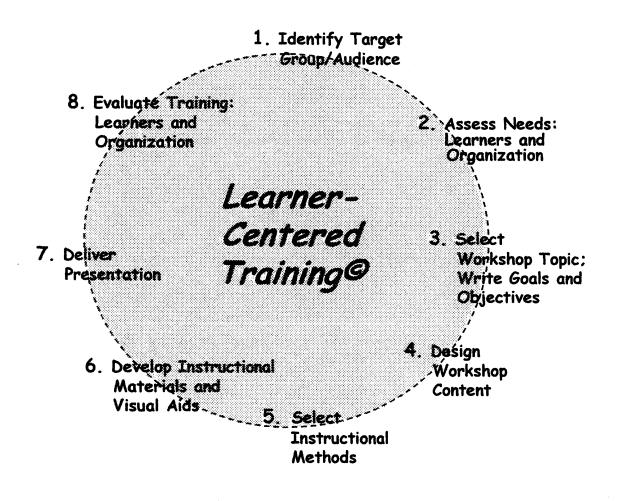
TRAINING DESIGN & DEVELOPMENT

- o Active Learning
- o Learner-Centered Training Model®
- o Lesson Plan Examples and Resources
- o Exercise: Anatomy of a Lesson Plan





Design, Develop, Deliver!



© Carina Celesia Moore Constance Stevens, 1999

Designing an Active Training Program

- Assess participants
- Set general learning goals
- Specify objectives
- Design training activities
- Sequence training activities
- Start detailed planning
- Revise design details
- Evaluate the total result

(Adapted from Silberman, Mel, 1990. <u>Active Training: A Handbook of Techniques, Designs, Case Examples, and Tips</u>. San Francisco: Jossey-Bass, Inc. pp. 3-4.)

Developing a Lesson Plan

- ★ Infuse with interaction
- Use visual aids

- happened

DEVELOPING A LESSON/PRESENTATION PLAN

(Choose a heading for each category)

CATEGORY #1

- **■** Trainer
- Instructor
- Presenter

CATEGORY #2

- Topic
- Subject
- Activity
- Procedure
- Name
- Module
- Class
- Course
- Workshop

CATEGORY #3

- Objective
- Goal
- Purpose
- Program Goals
- Outcome
- _
- _

CATEGORY #4

- Learners
- Audience
- Training Group
- -

CATEGORY #5

- Time

CATEGORY #6

- Materials
- Visual Aids
- Handouts
- Props

CATEGORY #7

- Outline
- Body
- Activity Steps
- Program
- Script

CATEGORY #8

- **■** Evaluation
- Final Assessment
- Test
- _

CATEGORY #?

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Lesson Plan Format and Checklist Developing Instructional Design Page: 55

Author: Geru McAdle Crisp Publication

Contact Person: Coleen Jones (206-340-1933)

DAMPLE LESSON PLAN

PARTICIPATORY TRAINING METHOD PRESENTATION

MODULE:

Site Characterization: Starting the Health and Safety Plan

ACTIVITY:

What's On Site?

TIME:

Entire Module: 1 - 1 1/4 Hours. Activity: 40 - 50 Minutes

COURSE:

40-hour Hazardous Waste Workers Health and Safety Course

(First Day: either as an introduction or summary of the hazard recognition section of the

course.)

OBJECTIVES: After completing this module students should be able to:

Define the process of site characterization and explain how it relates to the site-specific health and safety plan.

Recognize hazards more easily.

Identify sources of off-site information.

Participate in group problem solving more successfully.

OUTLINE:

Introductory Lecture (20 Minutes) 1)

* What's in a health and safety plan

* Stages of site characterization

* Starting a health and safety plan

Students answer the questions on the activity sheet using site photographs and their 2) Manual.

(15 - 20 minutes)

One person from each table report back the conclusions of that table. This can be 3) done at the table or instructors can have each table summarize their conclusions on a large piece of paper for posting and discussion.(15 - 20 minutes)

Present the results of the preliminary evaluation of the Bright Corporation Site and 4) discuss how the additional information effects the precautions students think should

be required before going on-site.(10 minutes)

Summarize emphasizing the importance of the preliminary investigation and its 5) relationship to the site specific health and safety plan. (5 minutes)

HANDOUTS:

Site Photographs

Activity Sheet with Questions

Site Map

Visual Inspection Checklist

Results of Preliminary Evaluation

MATERIALS:

Easel with paper Magic markers Masking tape

PRESENTERS:

Susan Shepherd, MassCOSH

Philip Korman, Western MassCOSH

CONTACT:

Howard Herman-Haase

The New England Consortium Work Environment Program

UMASS-Lowell Lowell, MA 01854

Tel: (508) 934-3259 Fax: (508) 452-5711

LESSON PLAN

MODULE:

Air Monitoring Instruments.

COURSE:

Eight Hour Refresher. This activity is a part of the afternoon session of the 8 hour Refresher. The trainees are divided into 3 groups. There are 3 Work Stations and each group rotates to a different Station. All the trainees have the opportunity to attend each Station. The Need Assessment results determine which three workstations are selected for each 8 hour refresher. The Work Stations are:

- Air Monitoring Instruments
- Hazard Communication
- Incompatible Chemicals
- Personal Protective Equipment
- NFPA/DOT Hazard Identification

TIME:

One hour and 15 minutes

OBJECTIVES:

Trainees will be able to:

- 1) Distinguish between instantaneous (direct reading instruments) and composite (integrated) sampling methods
- 2) State when it is appropriate to use each of the direct reading instruments discussed in this section.
- 3) Determine when integrated sampling should be done
- 4) Interpret air monitoring results and compare them to the Permissible Exposure Limits (PEL's).
- 5) Select personal protective equipment based on air monitoring results (emphasis is on respiratory protection).

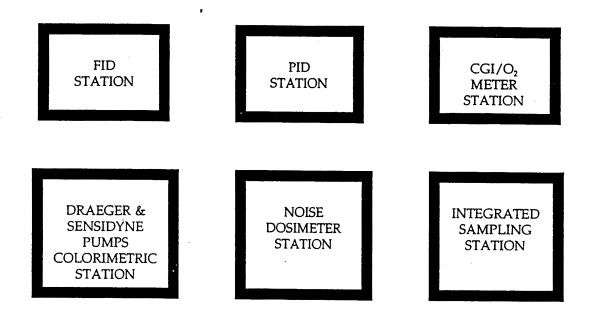
OUTLINE:

- 1) Introduction: differences between instantaneous and composite sampling are explained.
- 2) Direct reading instruments (FID,PID, CGI, Oxygen Meter, Color Detector Tubes and Pumps) are discussed and demonstrated.
- 3) Explanation/discussion of integrated sampling:
 - purpose of integrated sampling
 - · sampling media
 - NIOSH sampling criteria

4) Trainees rotate among 6 substations using the instruments to identify chemicals. They do a short exercise at each of the substations which reinforces the significance of air monitoring and air monitoring results. This segment of the module gives them the opportunity to operate the instruments and accomplish objectives 2–5.

AIR MONITORING EXERCISE STATIONS

Trainees rotate among the following substations:



HANDOUTS: The 8hr refresher trainee guide for air monitoring entitled, "Air Monitoring and Instrumentation." Trainees are also given the "Integrated Sampling/Personal Monitoring" Excercise Packet.

MATERIAL NEEDED: Air Sampling Instruments: FID, PID, CGI, Color Detector Tubes and Pumps (Draeger, Sensidyne), Integrated Sampling Equipment (Personal Sampling Pumps, Calibrator, Sampling Media).

Sample Chemicals: Acetone, Ammonia, Acetic Acid

PRESENTERS: Richard Green and Arlene Feingold

CONTACT: Richard Green, UCLA-LOSH 1001 Gayley Ave. 2nd floor Los Angeles, Ca 90025 (310) 794-0369

HAZARDOUS MATERIALS RESOURCES

by

Antonio Erazo & Kim Bean

California-Arizona Consortium Annual Train-the-Trainer Workshop April 23, 1998.

Sources of Information for Hazardous Materials

Activity Time: 1 1/2 - 2 hours

Objectives:

After completing this activity, participants will be able to:

- 1. Name at least two sources of information that can help workers learn about the hazards of the chemicals they work with.
- 2. Recognize each resource and explain the type of information that can be found in:
- ► Material Safety Data Sheets (MSDS)
- the National Fire Protection Association's (NFPA) labels
- the North American Emergency Response Guidebook (NAERG)
- the Hazardous Material Identification System (HMIS) labels
- the National Institute of Occupational Safety and Health (NIOSH) Pocket Guide
- 3. Use the different resources to find answers to their questions about health and safety on the job.

How it works:

This activity reviews different sources of information used to learn more about hazardous materials/waste. Participants assume the role of the health and safety committee and rotate through seven different stations set up around the room. (See Stations Materials list) Using a worksheet, participants utilize different resources to fill in the answers to questions about hazardous materials. Depending on the background knowledge of the group, participants have 5-7 minutes at each station.

Instructor's note on using this activity:

This activity can be used either as a review of hazardous materials resources or as a way of introducing participants to different resources. You should adapt the lesson plan to meet the needs and experiences of your audience. Conducting a needs assessment with participants in advance of the course can help you plan how to adapt the activity. Based on their experiences and workplaces, you may choose to use different hazardous material examples, focus on fewer resources and stations, and/or create new stations.

I. Introduction (5 minutes)

Materials: Flipchart and markers

There are many ways to identify the chemicals we work with on the job.

- ▶ Why is it important to know what chemicals we're working with?
- ► Where could you get information?

Generate list (ie. MSDS, labels, NFPA, HMIS, DOT placards)

II. Exercise: Match the card to the labeling system/source of info (10 minutes)

Materials:

- -5 Flipchart sheets, each with a heading: MSDS, product label, NFPA, HMIS, DOT.
- -Multicolored cards with phrases that apply to different sources of info (see attached list); each phrase in a large font, on 1/2 sheet of 8.5 x 11 paper
- -DOT placards
- 1. Show the group that you have 5 pieces of flipchart up front, each with a heading for a source of information: MSDS, product label, NFPA, HMIS, DOT.
- 2. Break people into groups of 2 3. Explain that each group will receive 4-5 cards that each contain a phrase that applies to a source of information (groups also receive DOT placards to place). They are to decide which source each phrase applies to and go stick it up on the corresponding flipchart sheet.

Phrases to use for matching the card to the labeling system:

(Each group receives 4-5 of these, shuffled, and also receives some DOT placards.)

Product Label:

- -Must be on each container of chemicals
- -Chemical name
- -Notifies about danger associated with chemical

MSDS:

- -Has 9 sections with information about a chemical
- -Gives information about first aid
- -Material Safety Data Sheet
- -Provides the name and number of the manufacturer
- -Chemical name
- -Information in case of emergency

NFPA:

- -A system that uses 4 colors and numbers to describe the hazard
- -Has a section in white, to describe special hazards

- -Generally is found where it is visible from the outside
- -Created by a fire agency

HMIS:

- -A system that uses 4 colors and numbers to describe the hazard
- -Has a system that involves letter coding to describe what type of PPE one must wear

DOT:

- -Developed by the Dept. of Transportation
- -A system that uses a variety of placards with colors, symbols, and numbers
- -Uses numbers to identify specific chemicals

III. Discussion/Debrief previous activity (20-30 minutes)

Materials:

- -Blank NFPA
- -Blank HMIS
- -sample label for containers (acetone)
- -sample MSDS
- 1. Review each flipchart. Go over the cards that are on each flipchart and ask group whether each is in the right place. Move cards around if need to correct wrong answers. Fill in information/key points about each system through the discussion questions, such as:
- a. Why is it important to know the scientific name of a chemical, as is found in the product label?
- b. Who is in charge of keeping all the MSDS?
- c. Who has a right to have access to the MSDS?
- d. Which sections of an MSDS are most useful for workers?
- e. What are the differences between the NFPA and HMIS systems? Where have you seen each?
- f. Who might the NFPA system be most useful for? What additional information does HMIS provide?
- g. How do you interpret the PPE information (letters) of the HMIS system?
- h. Who is in charge of determining what type of PPE employees should have?
- i. How are the DOT placards useful? Who were they designed for? How do you identify the chemicals?
- j. What does the DOT emergency response guide provide? How do you use it?

IV. Introduction to Stations Activity (10-15 minutes)

- 1. Review the objectives for this session and describe the activity (see *How it works*). If you haven't been able to do a needs assessment with the group in advance, explain that you will be asking people about their familiarity with different resources and explaining how to use them as you review the worksheet. Encourage people to ask for clarification if they need it about the worksheet questions and/or resources.
- 2. Pass out the 3 page worksheet (Using Resources to Identify Hazardous Materials--see attached). Read the introductory paragraph aloud.
 - ► Then read through Stations #1 and #2, and give more background on how the NAERG works if people haven't used it before (See pg. 1 in NAERG)--You may want to pick a couple of practice examples. Make sure people are clear about the questions for Stations #1 and 2 before moving on. (Note: You do not need to spend time here discussing NAERG or each system in the other stations if you have done the introductory review exercise)

► Read through:

Station #3; reference binder materials that describe labeling and encourage people to refer to these pages if necessary when completing this section.

Station #4; ask about people's experience with NFPA and using MSDS's. Do brief explanation of both systems if necessary and reference binder materials while doing so.

Station #5 is fairly self-explanatory; ask people to draw on their own workplace experiences with first aid and think about emergency situations when completing this station.

Station #6 involves working with HMIS poster and label; many workers are unfamiliar with this system so a brief explanation of the poster, and even practice reading a filled-in HMIS label may help participants. Reference one page handout in binder describing HMIS, and give additional background if participants are interested.

HMIS was developed by National Paint and Coatings association in 1976 as a way for their members to comply with HAZCOM. The labels use a 0 to 4 rating to warn employees of health, flammability and reactivity of chemicals (similar to NFPA).

The HMIS system uses an alphabetical code to explain the different PPE that should be worn while working with a chemical (this system is quite different from the EPA Level A-D and therefore may need some explaining). The HMIS system is available in both English and Spanish.

Station #7 involves using the NIOSH pocket guide and MSDS's. If participants haven't used the pocket guide, pass them out and have people turn to page ix and do a brief explanation of how to use the pocket guide. You may want to look up a chemical to have people practice getting the information.

Ask if people have any final questions about the worksheet or the resources.

V. Stations Activity (30-40 minutes)

Break people into seven groups; remind them about the amount of time that they'll spend at each station, and that each group should choose a spokesperson to report back on one station (Group 1 for Station 1, Group 2 for Station 2, etc.).

Start the activity; as people go through stations, you may want to assist groups who get stuck to keep things moving. Ring the bell every 5 minutes and move people onto the next station.

VI. De-briefing from activity (20-30 minutes)

After participants have gone through all seven stations (could take about 40-45 minutes), have them return to their seats. Begin with group 1, and ask them to discuss their answers on the worksheet for Station 1 (see instructors notes for guidance); continue all the way through station 7. You can again review the resources and clarify information as you move through de-briefing each station.

Instructor Notes to Activity: Using Resources to Identify Hazardous Materials

Your group is part of your Workplace's Health and Safety Committee. Today you will doing a walk-through of the plant to evaluate the "chemical hazards safety program." You will go to each of the 7 stations (that represent different areas of the plant) to evaluate systems that are in place to identify hazards. At each station, you'll have 5 minutes to use a resource to fill out this worksheet. At the sound of the bell, move to the next station.

Station #1: Area of shipping & Receiving

Chemicals that are now waste are being transported to the Recycling Center. Fifty barrels of spent sulfuric acid are being shipped out.

1. Pick the appropriate DOT placard for this shipment.

1826

1832

2334

2. Using the NAERG guide, what are the health hazards of sulfuric acid?

The appropriate label is 1832 (found in the yellow section, pg. 38). Then they should have looked up the "number guide," which is 137, pgs. 222 and 223. Resource: NAERG (North American Emergency Response Guide).

Station #2: Storage Area

Your group suspects some barrels don't have the right label. You did the chemical analysis and you know that the DOT placards *are* correct for each barrel. This means the label with the product name is incorrect on 1 barrel.

3. Which is incorrect?

The incorrect label is benzene. This info is found in the blue

section of the booklet (pg. 139);

What should it say?

2031 is nitric acid, not benzene.

• What are the health hazards for this product? (Use the NAERG book to look this up)

The health hazards are found by using the "number guide" as in Station 1 (pgs. 262 and 263). Gasoline/1203 (pg. 125) and PCB/2315 (pg. 149)

Station #3: Work Area

Workers in the shipping area have just received these drums.

a.) What information is required for a label?

Labels should provide warning of the hazards and give a number to call in case of emergency, as well as the name of the manufacturer.

b.) Are these appropriate labels as required by law?

These labels are not sufficient based on Haz Com.

c.) Why or why not?

(Look in binder, pg. 2)

d.) Should these products be stored together?

(Look in binder, pg. 2)

Station #4: Hazardous Waste Treatment Area

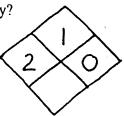
The workers who work in the garage are exposed to antifreeze and motor oil. There is no NFPA label in this area. Use the MSDS, for antifreeze, which has the chemical name "ethylene glycol" to answer the following questions.

a.) What do different NFPA colors and numbers mean?

See binder for an explanation of the NFPA system.

b.) What should the NFPA label say?

NFPA label should read



Station #5: Emergency Shower and Eyewash Area

Your group decides this area should have a First Aid sign. Workers who work in nearby areas may be exposed to Muriatic Acid and Caustic Soda.

a.) What should the sign say regarding First Aid? Write the information you would include:

First Aid section of the MSDS will give required information.

Stations Materials

The stations will be set up around the room, before the course starts.

Materials Needed for All Participants:

- -Student Worksheet
- -HMIS Poster
- -NAERG Guidebook (number to match the number of participants)
- -NIOSH Pocket Guide (number to match the number of participants
- -2 copies of each MSDS
- -NFPA poster (optional)

Materials, Station 1:

- -1 truck drawing on flipchart paper
- -3 placards (on post-it notes) with the numbers: 1826, 1832, 2334
- -NAERG Guidebook

Materials, Station 2:

-A drawing of three barrels (drawn big) with DOT placards on flipchart paper







- -3 placards (on post-it notes) with the numbers and chemical name: 2031/Benzene, 1203/Gasoline, 2315/PCB's
- -NAERG Guidebook

Materials, Station 3

- -2 pictures of drums, each with label
- -Labels for each box (the actual label):

Label #1:

caustic soda

40%

Label #2

acetone

-2 copies of the MSDS for each product (caustic soda and acetone)

Materials, Station 4

- -Large, Blank NFPA label (actual label)
- -2 copies of the ethylene glycol MSDS

Materials, Station 5

-2 copies of each MSDS for muriatic acid and sodium hydroxide

Materials, Station 6

- -HMIS label filled out for toluene (See MSDS for HMIS ratings; PPE code is c+q)
- -1 large barrel drawn on flipchart paper (for the HMIS label)
- -different respirators (about 2 half-mask of different brands each)
- -different cartridges (organic solvents, acids, etc)
- -four types of gloves (neoprene, nitrile, butyl rubber, and viton)
- -simplified glove chart + North glove chart
- -2 copies of the toluene MSDS
- -1 pair of boots, 1 apron, 1 pair of goggles

Materials, Station 7

- -NIOSH Pocket Guide
- -2 copies of each MSDS for toluene, sodium hydroxide or ethylene glycol

Worksheet: Using Resources to Identify Hazardous Materials

Your group is part of your Workplace's Health and Safety Committee. Today you will doing a walk-through of the plant to evaluate the "chemical hazards safety program." You will go to each of the 7 stations (that represent different areas of the plant) to evaluate systems that are in place to identify hazards. At each station, you'll have 5 minutes to use a resource to fill out this worksheet. At the sound of the bell, move to the next station.

aste are being transported	I to the Recycling Center. Fifty barrels of	•
OT placard for this shipm	nent.	
1832	2334	
le, what are the health ha	zards of sulfuric acid?	
barrels don't have the rigacards are correct for eacon 1 barrel.	ch barrel. This means the label with the	.d
	Area barrels don't have the riacards are correct for each	DT placard for this shipment. 1832 2334 de, what are the health hazards of sulfuric acid? Area barrels don't have the right label. You did the chemical analysis an acards are correct for each barrel. This means the label with the

Station #3: Work Area Workers are cleaning parts in these tanks. Each tank has a label.
a.) What information is required for a label?
b.) Are these appropriate labels required
c.) Why or why not?
d.) Should these products be stored together?
Station #4: Hazardous Waste Treatment Area The workers who work in the garage are exposed to antifreeze and motor oil. There is no NFPA label in this area. Use the MSDS, for antifreeze, which has the chemical name "ethylene glycol" to answer the following questions. a.) What do different NFPA colors and numbers mean?
b.) What should the NFPA label say?
Station #5: Emergency Shower and Eyewash Area Your group decides this area should have a First Aid sign. Workers who work in nearby areas may be exposed to Muriatic Acid and Caustic Soda. a.) What should the sign say regarding First Aid? Write the information you would include:
b.) In the workplace, what things would be important to have in terms of first aid?

Station #6: Protective Clothing One barrel with an HMIS label has arrived.

a.) What type of PPE should workers wear to work with this chemical?
Respirator Gloves Glasses Ear Plugs Hard Hat Boots Apron
b.) Which is the proper type of cartridges to protect against exposure?
c.) Which of the gloves on the table will minimize your exposure to this chemical? Why?
How long can a worker use the same gloves?
Station 7: Additional Resources a.) Using the NIOSH pocket guide and the MSDS (toluene, sodium hydroxide or ethylene glycol), look up information about the health effects, PEL, TLV, and one of the chemicals).
b.) Indicate which resource was more complete, more helpful, and easier to understand.

b.) In the workplace, what thi	ngs would be important to have in terms of first aid?
See First Aid section.	Reinforce the importance of eyewash and shower.

Station #6: Protective Clothing

One barrel with an HMIS label has arrived.

a.) What type of PPE should workers wear to work with this chemical?
Respirator Gloves Glasses Ear Plugs Hard Hat Boots Apron
The HMIS codes for PPE will tell them what equipment they should use.
b.) Which is the proper type of cartridges to protect against exposure?
Since the barrels contain a solvent, the cartridge and glove selection can be made based on the MSDS.
c.) Which of the gloves on the table will minimize your exposure to this chemical? Why?
See above.
How long can a worker use the same gloves?
See above.

Station 7: Additional Resources

a.) Using the NIOSH pocket guide and the MSDS (toluene, sodium hydroxide or ethylene glycol), look up information about the health effects, PEL, TLV, and one of the chemicals).

In the NIOSH pocket guide see the following pages: toluene pg. 311; sodium hydroxide pg.284; ethylene glycol pg. 136.

b.) Indicate which resource was more complete, more helpful, and easier to understand.

Designing Learner-Centered Training

SAMPLE LESSON PLAN

TOPIC: Designing Learner-Centered Training

TARGET GROUP/AUDIENCE: Health & Safety Professionals

GROUP SIZE: 15 - 60 people

LEVEL OF INTENDED AUDIENCE: Intermediate

TIME: 1 hour 30 minutes

LEARNING OBJECTIVES: By the end of this workshop participants will:

- · Take a "guided tour" of the Learner-Centered Training Model
- · Discuss target groups/audiences
- Identify potential workshop topics
- · Complete a lesson plan worksheet
- · Participate in an on-the-spot evaluation

INSTRUCTIONAL METHODS:

- · Facilitated Discussion
- Small Group Activity
- On-The-Spot Evaluation

SAMPLE LESSON PLAN continued

VISUAL AIDS: Easel and paper; markers; handouts (Model, Agenda, Worksheets, Presentation Tips, Suggested Readings, Lesson Plan Examples, Evaluation); overheads; projector and screen.

CONTENT/PRESENTATION:

- INTRODUCTIONS: Instructor introduce herself. Participants introduce themselves to the group.
- REVIEW AGENDA
- REVIEW LEARNING OBJECTIVES
- OVERVIEW OF THE LEARNER-CENTERED TRAINING MODEL: Briefly introduce the 8 steps in the model.
- LEARNING ACTIVITY: Conduct "guided tour" and facilitate the completion of the worksheet.
 - Facilitate a brainstorm/discussion of the first two items on the worksheet: Target Group and Needs. Direct the group to get into partners (dyads). Participants complete the two items on the worksheet:
 - » Select a target group/audience
 - » Identify the needs of this group
 - Bring the large group back together and facilitate discussion regarding these two items. Ask open-ended questions to process the experience.

SAMPLE LESSON PLAN continued

- Facilitate a brainstorm/discussion of the next two items on the worksheet: Workshop Topic and Learning Objectives. Direct the group to get into partners (dyads). Participants complete the two items on the worksheet:
 - » Select a workshop topic
 - » Write one or two learning objectives
- Bring the large group back together and facilitate discussion regarding these two items. Ask open-ended questions to process the experience.
- Facilitate a brainstorm/discussion of the next two worksheet items: Instructional Methods and Visual Aids. Direct the group to get back into partners (dyads) and complete items five and six on the worksheet:
 - » Select instructional methods
 - » Select visual aids
- Bring the large group back together and facilitate discussion regarding these last two items. Ask open-ended questions about the experience.
- 6. EVALUATION: Conduct an on-the-spot evaluation using a Help/Hinder chart. Divide an easel pad into two columns with the headings "Help" on the right and "Hinder" on the left. Ask the group for feedback on what helped their learning and what hindered their learning during this workshop.
- CLOSING: Point out the books and sample lesson plans. Refer to the Presentation Tips and the Suggested Readings list. Ask participants to fill out conference evaluations.

INSTRUCTIONAL METHODS

Exercise: BrainstormExercise: Mind Mapping

■ Exercise: Handling Problem Situations

■ Exercise: Small Group Activity Method (SGAM) - "Toxic Myths"

Other Methods: Lecture, Facilitated Discussion, Role Play, Games, Demonstration

Instructional Methods

Ice Breakers and Warm-Up Activities Needs Assessment Brainstorming Mind Mapping Lecture Facilitated Discussion (Participatory Lecture) Small Group Activity Method (SGAM) Case Study Role Play Games Demonstration and Return Demonstration Help/Hinder Evaluation

Brainstorming

- Purpose
- Allows everyone to express their ideas.
- Gets lots of ideas out.
- Write a specific topic or question of the chart pad.
- The group can call out any idea on the topic.
- There are no wrong answers. No discussion allowed.
- Every idea is recorded on the chart pad.
 - Consider a structured approach.

Mind Mapping - 1 · What negative behaviors have Instructional Methods you experienced from individuals in your training sessions? What problem situations have occurred in your training sessions? · In silence, write one problem behavior on each post-it. Mind Mapping - 2 In silence - put each of your post-its on the chart pad. Read all of the post-its. · As a group, identify major themes. · Circle the major themes. Mind Mapping - 3 For each of your major themes, identify ways of handling these problems. · Chart pad your responses.

Handling Problem Situations Six Principles

- Don't take problems personally.
- Establish group norms and ground rules.
- Manage your feelings. Maintain your leadership.
- Don't intervene every time a participant exhibits a problem.
- Give opportunities for face-saving and changing behavior.
- Prevention and intervention are key.

Small Group Activity Method (SGAM)

- together and use collective experience to Small Group Tasks: 4-6 people work tackle problems.
- whose job it is to take notes on the group **Report Back:** The group selects a scribe, discussion and report back to the large group.
- key points, bringing up any issues or learning points that have been overlooked discussion together and highlights the Summary: The trainer brings the or need emphasizing.

Dividing Into Small Groups

- Counting off the larger groups, e.g., 1-2-3-4, 1-2-3-4, etc.
- Identify a leader, then let participants self select.
- Select by birthday (January, February, etc.), place of birth (South, East, West, etc.)

Tackling Toxic Myths Exercise

people). Each group is assigned a "toxic myth." Break up into small groups (3-4

In small groups, use the fact sheets to prepare a brief presentation that addresses the "toxic myth" in your assignment.

Report back to large group.

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Activity 3: Tackling Toxic Chemical Myths
The Labor Institute
853 Broadway
New York, NY
10003
212-353-1203

Author: Dr. Steven Markowitz

nstructional Methods

Questions - Participatory Lecture

- Address the question to the entire group.
- Wait for a response. Trainees need at least 4-5 seconds to think of a response.
- Keep a good interchange going/bring out more info and ideas.
- · Get non-participants involved.
- · Clarify info or comments.
- · Keep discussion on target.
- · Get agreement, solution or conclusion.

Role Playing

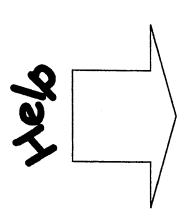
- nstructional Methods
- Allows opportunities for feeling situations and experimenting with possible solutions or interactions.
 - Assign roles.
 - Allow time for participant planning of their role.
 - Allow for some spontaneous acting.
 - Follow-up with analysis and evaluation.

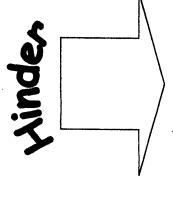
Furpose Reinforce principles using skill or information Interactive Fun activity Criteria Applies to subject matter Learning objectives stated Accurate information represented Complexity appropriate Examples "Pursuit" or board games Popular TV game shows Jigsaw puzzles

Demonstration and/or Teaching Manipulative Skills Describe the skill; list the steps to be taken. Perform the skills; demonstrate the correct steps on the list. Have students perform the skills with you. Have students perform the skill independently.

Help/Hinder

- that HELPED your learning and those that Spontaneously brainstorm all the factors HINDERED your learning
- chart pad (some factors may be on BOTH Chart responses on appropriate side of a sides)





Using Participatory Lectures

Lectures can present new information. Traditional lecture methods are often primarily one-way — the trainer talks and participants listen. But a lecture can also be used in combination with a participatory activity. Combining lecture with a demonstration or role play can give participants an opportunity to apply the information.

The activity can come before, during, or after the lecture. An activity can be used at the beginning to help lead into your topic. Using an activity during the lecture can change the pace and keep people interested. Ending with an activity can give people an opportunity to review and apply the lecture material.

Advantages

- Lectures combined with participatory activities can introduce new concepts and facts quickly and efficiently.
- The activities can be a useful way to reinforce and apply important information covered in the lecture.
- The activities can provide a change of pace and keep people interested.

Disadvantages

- Lectures can be a passive and boring form of training unless they are combined with discussion or other participatory activities.
- Lectures, even some that include activities, rely heavily on trainer knowledge and preparation.
- They can easily overwhelm participants with information.

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Tips

- Keep the lecture brief.
- Supplement it with visuals to emphasize key points.
- Keep your language clear, and don't use jargon or abbreviations.
- Ask questions and draw on participants' experiences to avoid one-way communication.
- Have participatory activities before, during, or after the lecture.

Using Brainstorming

Brainstorming can generate a range of responses to a broad, general question. Participants are encouraged to offer the first response that pops into their mind about a particular issue. The trainer and the participants should not comment on or respond to anyone's ideas until the end of the exercise.

Advantages

- Brainstorming encourages the use of imagination.
- It draws on participants' own experience and expertise.
- It is a good warm-up for more complex or challenging activities such as role playing.
- It can generate new ways of looking at an issue.
- The number of possible answers is unlimited.

Disadvantages

- Brainstorming can be hard to facilitate in a large group.
- Participants may begin criticizing one another's ideas without strong facilitation.
- Participants may have little to say on the subject or may not feel comfortable sharing their ideas.

continued

Tips

- Choose a thought-provoking question that all members of the class can respond to.
- Repeat each answer orally before writing it down.
- As much as possible, write down participants' responses in their own words.
- Allow time for everyone to contribute.
- Review the list of responses at the end.

Sample Brainstorm: "What Do You Think?"

Adapted from LOHP and a variety of other training sources.

Time: 20-40 minutes.

Objective: To draw out participants' own experiences and thoughts on an issue.'

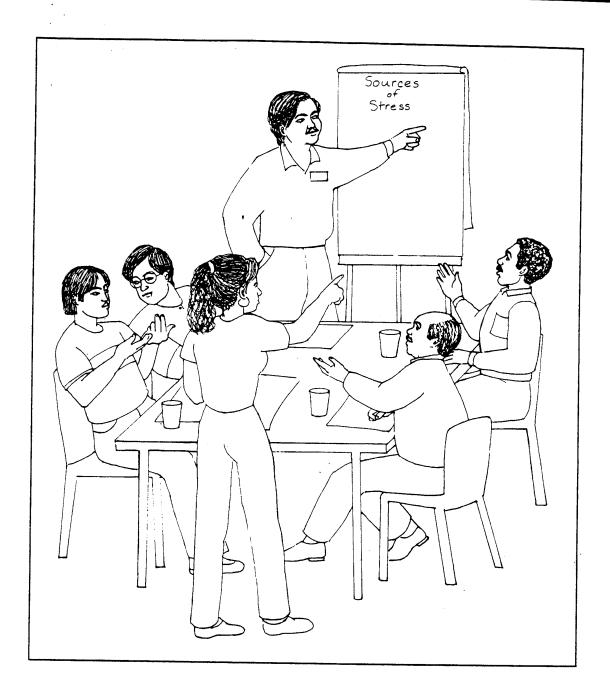
Use: Should be adaptable to almost any training situation.

How it works: Ask an open-ended question that has many possible answers. Let people respond. Repeat all answers orally; then write them down. Depending on your topic, you might ask one of these questions:

- What makes something hazardous?
- What are some reasons you shouldn't smoke at work?
- What have you heard about how the HIV virus is transmitted?
- What makes health and safety factsheets hard to understand?
- What is it about personal protective equipment that makes workers not want to use it?
- What are some of the barriers to creating an effective joint labor-management health and safety committee?

continued

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- What are the ways we can improve safety at this particular worksite?
- What suggestions do you have for making this workstation more comfortable?
- What are the sources of stress on your job?

SMALL GROUP ACTIVITY METHOD (SGAM)

The SMALL GROUP ACTIVITY METHOD (SGAM) is a structured process that allows us to share information and is based on three learning exchanges:

- Participant-to-Participant: Most of us learn best from each other. The SGAM emphasizes the participant-to-participant learning exchange where people learn from each other by solving problems through <u>small group discussion</u>.
- Participant-to-Trainer: On many subjects, adult students will have as much, or more collective knowledge than any one expert. Trainers can learn a lot from adult students. In the SGAM, this is done through report-backs. This enables the trainer to learn more about the realities people face. This training method shows genuine respect for participants' knowledge and helps to build confidence among those we are training.
- Trainer-to-Participant: This is a traditional training method, and it also has its place in SGAM. It comes at the end. The trainer can clear up any confusion and make the key <u>summary points</u>. By waiting until the summary section, we now know what additional information or clarification is needed.

BASIC STRUCTURE OF SGAM:

- Small Group Tasks: Four to six people work together and use collective experience to tackle problems.
- Report Back: The group selects a scribe, whose job it is to take notes on the small group discussion and report back to the workshop group as a whole.
- Summary: The trainer brings the discussion together by highlighting the key points, bringing up any issues or learning points that may have been overlooked and summarizing the key points.

Sample Small Group Exercise: "Taking Action to Solve Workplace Problems"

From Labor Occupational Health Program, (LOHP).

Time: 60-90 minutes.

Objective: To encourage, groups to analyze a workplace problem and create a plan for solving it.

Use: Should be appropriate for most groups of workers.

Background: Begin with a brief discussion of actions that workers can take to solve workplace health and safety problems. Through this discussion, you should generate a list of possible actions on a flipchart.

Examples:

- Talking with the boss.
- Talking with the shop steward or union representative.
- Organizing a health and safety committee.
- Collecting documentation, such as health surveys, medical records and information on chemicals.
- Calling OSHA.
- Refusing to do the work.

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Demonstration

1990 Training of Trainers (Conducted by LOHP, UC Berkeley)
Adapted from Planned Parenthood & the Family Planning Evaluation Institute
"Compendium of Training Techniques"
The Labor Institute & the Oil, Chemical, & Atomic Workers International Union
853 Broadway
New York, NY
10003

212-353-1203

Uses of Questions in Training Uses Samples Get discussion started What are the main purposes of . . . How would you define . . . ? What is your opinion of . . . ? Capture and maintain Morale! What does the term mean to you? interest What would you look for to evaluate the state of morale in work group? Of these elements, which would seem to be the most meaningful? Why? Keep group interchange Interesting point. Charlie. How do the rest of you react to this (or going/bring out more direct the question)? information and ideas. Are there additional points that should be considered? Now we've heard the positive, what are some negative points that should be discussed? Get non-participants From this experience Pete, how would this point of view affect that involved part of the company? What's your opinion, Charlie? Where have you seen this occur, Pat? As a woman. Kathy, how do you react to this hiring policy? Clarify info or comments Can you give us an example of your point of view? Helen, how would you interpret or paraphrase Jim's point? How does this new policy differ from (compare with) the old policy? Keep discussion on target Interesting point. Can you relate it to the earlier point made? Whoa! What was the original question asked?

or topic turnover, or etc.)?

Lead discussion to next

Now, how does morale relate to job performance (or production,

Given this data, what conclusion can we draw? Assess and evaluate info Handle "problem" Do you always hold a minority point of view. Charlie? member How many of the rest of you would like to discuss the question Charlie asked? Looks like it's you and me, Charlie. Can we discuss our different points of view at lunch? I understand but disagree with your point. Charlie. Do you feel the same about mine? Fine, let's leave it at that and move on. (If no ask "understanding" question of rest of group and go on or review material, depending on response). Suggest desired response Wouldn't this be a better way? Ten percent seems about right, doesn't it? If you want to find out if somebody knows something, what's the first, most obvious thing you should do? Determine understanding/ • What is the first step in this process? Get feedback Can you give an example of the second step? Would you express the third step in your words? If you were faced with a disciplinary problem, how would you apply the three steps? Have you seen this procedure used in non-work situations? (Explain) Why is it necessary to follow these steps in sequence? Get agreement, solution What possible conclusions can we draw from this information? or conclusion Do any of you disagree with what's been said to this point?

What is the end result of all this?

When you add it together, what does all of this mean to us as

trainers?

<u>Level</u>		Phrasing of Question
I.	Knowledge	List the classifications of toxic waste Give the definition of corrosive
П.	Comprehension	Give a definition of toxicity in your words Give an example of an EPA rule about landfills.
m.	Application	Using what you know about chemicals, which of these two could be stored together?
IV.	Analysis	Which were the causes of Love Canal? Find arguments for the position that failure to provide protective gear should be punishable by fine.
V.	Synthesis	Create a training program for hazardous waste workers
VI.	Evaluation	Select the best training program.

ROLE-PLAY

This handout will answer the question, "What is role-playing, and when is it most productively used?"

Role-playing is on-the-spot "acting out" of a situation or incident. It is used to center group discussion around some concrete, observed experience. Role-playing is especially productive in a small group. It is one way for everyone to explore problems together. Through role-playing the group can:

- Test ideas and plans of action in practice situations;
- See how it feels to do/watch something face-to-face (in a discussion you
 just talk about it);
- Discuss the problems revealed by the role-play; analyze how the actors could have resolved the role play problem differently;

Setting up a role play has several steps:

- 1. The members of the group need to be seated around an open part of the room where the "acting" will take place.
- 2. The trainer defines a role-play that will present carefully planned case problems. Alternatively, the group may suggest situations thay have to face that they would like to see acted out in a role-play.
- 3. Ask for volunteers or choose actors from the group. In either case, you may want to give the actors instructions on mannerisms/attitudes or a chance to plan for their performance out of earshot of the rest of the group. Make sure everyone understands who the actors are supposed to be and what action is supposed to take place.

Ideas are from George Meany Center for Labor Studies' publication Education Techniques

 Instruct the observers to take notes on what goes on during the scene, and on how the actors choose to react to the problem.

Let the role-play run five to ten minutes. You may need to end the acting sooner if the actors start repeating themselves. During the follow-up discussion, first ask the actors how they felt in their roles and what they thought of the arguments/choices the other actors made. Second, throw the discussion open to the observers. Use the role names of the actors so that they won't be offended by criticisms of their arguments, approaches, or omissions. Be sure to stress the good choices the actors made, too, as well as the fact that many other role-plays about the same scenario are possible. Finally, as the trainer, summarize the discussion and relate it to the problem the role-play was trying to explore.

Example of a role-play

1. After a brief introduction to the limitations and inadequacies of Medical Surveillance (MS) programs, the trainer notes that individuals can make the MS program work for them by being assertive with physicians. Then trainees simulate through role playing a visit to the physician's office. After the role-play, the group discusses methods the actors tried (or could have tried) to be more assertive with the physician.

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Handling Problem Situations
Active Training: A Handbook of Techniques, Designs, Case Examples and Tips (2nd Edition)

Jossey-Bass, San Francisco, 1998 Pages: 237-244

Author: Mel Silberman

WORKSHEET GAINING LEADERSHIP OF THE TRAINING GROUP		
Group norms to	be encouraged:	
Time wasters to	be avoided:	
Comments to w	in participants over:	
Ideas for prever	nting problem behaviors:	

*** * ***

Handling Problem Situations - Six Principles

- Not personal The key to handling problem behaviors is to not take them personally.
- Establish group norms or ground rules at the beginning.
- Managing your feelings and remaining in control is important to your overall leadership of the class.
- It is <u>not necessary to intervene every time</u> a participant exhibits a problem behavior.
- Give participants space to discover a <u>face-saving</u> way to change his/her behavior.
- Prevention and intervention are the keys to establishing and maintaining control.

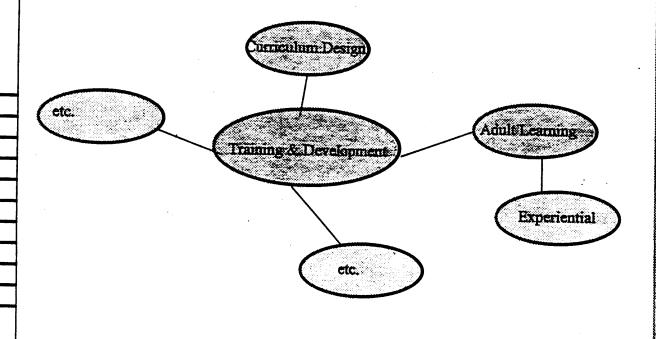
(Adapted from Silberman, Mel, 1990. <u>Active Training: A Handbook of Techniques, Designs, Case Examples, and Tips.</u> San Francisco: Jossey-Bass, Inc. pp. 212-219.)

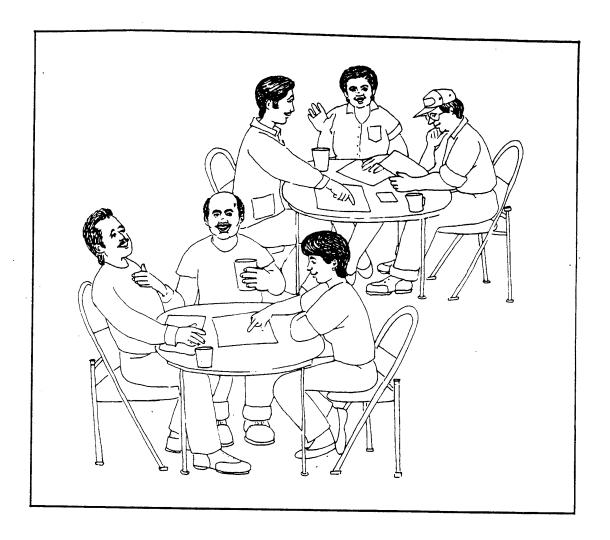
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Six Common Non-Facilitating Teaching Behaviors
Teaching and Case Method, 3rd Ed.
Harvard Business School Press, 1976
Author Sandra Napell
Pages: 199-202

Mind Mapping

- Share what you know already
- Maintain flexibility as individuals contribute ideas
- Cluster ideas as like groups emerge





How it works:

After discussing possible actions:

- Break the class into small groups of three to five people.
- Ask members in each group to come up with a list of problems they have at their own workplace.

- Ask a volunteer in each group to take notes on the discussion (if necessary) for a report back to the whole class.
- Each group selects one problem they would like to solve and chooses one of the action methods listed on the flipchart.
- Each group makes a plan for carrying out the action they have chosen.
- Each group then reports back to the entire class on:
 - Which workplace problem they chose to solve.
 - Which method of action they chose.
 - What plan they developed for taking this action.
 - What possible barriers there are to solving the problem with the chosen method.

Using Small Group Exercises

Small group exercises offer a participatory, nonlecture approach. Participants work together on various activities to solve real-life problems. Groups can work with a case example of their own or one prepared by the trainer in advance.

The trainer asks group members to work together to answer a series of questions or to figure out a course of action. One volunteer in each group takes notes or keeps track of the group's discussion. The group then reports results of the discussion back to the whole class.

Advantages

- Small group exercises allow for maximum participation and interaction.
- They draw heavily on workers' experience.
- They offer participants an opportunity to interact in a setting with a smaller number of people.

Disadvantages

- One group member may be domineering and make it difficult for others to participate.
- Small groups may not focus on the task at hand.
- Group members may have problems using written materials.

Tips

- Read the instructions for the exercise aloud before breaking into small groups. If possible, demonstrate these instructions visually.
- If there are several tasks involved in the exercise, it might be helpful to give directions in phases.
- If the exercise involves reading, ask for a volunteer reader in each group.
- Small group reports to the whole class should be presented orally, not in writing.

Designing and Delivering Effective Health and Safety Training

INSTRUCTIONAL MATERIALS & VISUAL AIDS

- o Easel Charts: How to Use Charting Effectively
- o Presentation Technology: Important Considerations
- o Handouts: Important Considerations
- o Exercise: Creating Visual Aids

Planning Your Visual Aids

Instructional Materials

- · Profile your audience.
- Select media according to learning objectives and equipment/resources availability.
- Establish trainer comfort level.
- Consider your preparation time frame.

Tips for Visual Aids and Presentation Technology

tional Materials:

- Simplicity
- Color and Pizzazz
- Organized
- · No more than 7 lines per visual.
- · Design visuals for the back row.
- · Be prepared with a back-up plan.
- · PRACTICE!

Designing or Recording on a Chartpad

Instructional Materials

- Record the speaker's own words.
- · Record key words only.
- · Write fast. Abbreviate.
- Post the chartpads so that participants can see them.
- · Number the pages.

Designing or Recording on a Chartpad

nal Materials

- · Use bold colors.
- · Use the fat part of the pen.
- Lettering on chartpad needs to be 1" for each 15' between chartpad and back row.
- · Stand to the side of the easel.
- Speak to the audience and not to the easel.
- · Use light pencil notes to yourself.

Designing Handouts

nstructional Materials

- · Use lots of white space.
- · Allow room for note taking.
- Include resource, reading or reference materials.
- Sequence of the handout should match the presentation.
- Include "job aides" or tools to take back to the job.

Exercise: Creating Visual Aids

- rough drafts of the visual aids you plan Individually, take 15 minutes to create to use during your presentation. Consider:
- How can you adapt your visual aids to rely less on reading and writing?
- How can you maximize student retention?
- drafts and plan for using the visual aids With a partner, describe your learning objectives and present your rough

Developing Easy-to-Read Materials



"When you're writing a manual, try to use everyday words. Instead of saying 'chemicals can permeate gloves,' why not explain the term and say 'chemicals can go right through gloves."

—Joe, Supervisor

Right to Understand: Linking Literacy to Health and Safety Training, Labor Occupational Health Program, University of California, 786rkeley

In This Chapter, We Will Discuss:

- How to write materials that are easy to read.
- How to design your materials so they are visually appealing.
- How to use illustrations to help explain your text.

Developing Easy-to-Read Materials



"I remember the first factsheet I developed on noise. I described the workings of the inner ear in great detail. When I asked workers what they thought, they said, "We don't know what you're talking about. Is this some kind of medical factsheet?" I learned a lesson about how to develop materials based on what people **need** to know and in a form that they can understand."

—Joan, Trainer

Developing easy-to-read educational materials is not an easy task. As health and safety trainers, we often feel that workers need to know **all** the technical information available on a topic.

This is not to suggest that you minimize important concepts. We do recommend, however, a sharper focus on what is **essential to know.**

The following pages describe the steps involved in developing easy-to-read materials. Many of the tips in this section are adapted from two recent publications on literacy: Just Say It! and Teaching Patients with Low Literacy Skills. (See Resources at the end of this chapter.)

Writing Tips

1. Base the content on the workers' most important needs.

Above all, keep workers' own concerns in mind. Conduct a needs assessment in advance to find out what they want and need to learn about. Leave out anything that is not of critical importance.

2. Establish your "priority message."

Priority messages present the most important information about a problem and discuss how it could be solved. An effective priority message:

- is short
- provides enough information
- gives suggestions for change
- is easy to remember.

Example:

"Lead dust is harmful and can get on your clothes. Change your clothes before leaving work."

Build your text around this priority message. Include only material that is relevant to it. Do not offer so much information that a reader will feel overwhelmed. Refer back to the priority message whenever you start to get sidetracked.

continued

3. Organize your text into short, logical sections.

Use headings or subtitles to help organize your text. Bulleted lists can also help readers to pick out important concepts.

Example:

Exposure to lead can harm:

- the nervous system
- the reproductive system
- the kidneys
- the blood
- the digestive system.

4. Use words that are easy to understand.

Many long words have synonyms that are much shorter and easier to understand.

Examples:

- doctor could be substituted for physician
- clean for sanitary
- burn for incinerate.

5. Define technical terms.

Talk to your audience to find out the technical terms workers already understand. For example, health care workers may use medical terms every day. Chemical workers may already be familiar with terms like "ignitable" and "corrosive." Ask workers which terms they prefer to use on the job. This will help you decide which terms need to be defined.

Examples:

- Asbestos is a **carcinogen** (something that causes cancer).
- Sulfur dioxide is a **respiratory irritant** (something that bothers the lungs).
- Carbon dioxide is a **simple asphyxiant** (something that stops air from entering the lungs).

6. Keep sentences short and simple.

Long sentences often have subordinate clauses. These can be difficult to read and understand.

Example:

Subordinate clause

Some pesticides, which have caused harm to the environment, have also been found to be harmful to humans.

Rewritten text

Some pesticides harm humans as well as the environment.

7. Use a conversational style and the active voice.

Write in the kind of language your audience uses. Stick to a conversational style and active verbs.

Example:

Nonconversational (passive voice)

Conversational (active voice)

Asbestos has been found to be a carcinogen.

Asbestos causes cancer.



Additional resources on **Developing Easy-to-Read Materials** are listed at the end of this chapter.

Design Tips

The design of your publication is just as important as its content. Most workers in our focus groups agreed that appearance makes a difference. Using ample white space, illustrations and headings in your publication will encourage people to read it.



"If you have a paragraph that is very important for the training, highlight it in special colors, box it, or put it in bold print. Make it stand out in some way."

—Isabel, Hotel maid

1. Use a large, serif typeface for your main text.

We recommend a **serif** typeface (letters with "feet") for the main text. The "feet" give each letter a more distinctive shape. They guide the reader's eye from letter to letter. Use a size of 12 to 14 points for normal text.

continued

Serif examples:

- This sentence is typed in a 13-point Times Roman typeface.
- This sentence is typed in a 13-point Palatino typeface.

A sans-serif typeface (letters without "feet") is best reserved for titles and headings.

Sans-serif examples:

- A heading typed in a 13-point Avant Garde typeface looks like this.
- A heading typed in a 13-point Helvetica typeface looks like this.

In this publication, we use a 13-point serif typeface (Bookman) for the main text. Titles and headings are in an 18-point sans-serif typeface (Avant Garde).

2. Emphasize important points with underlining, bold type, italics, or boxes.

Help your readers along by using <u>underlining</u>, **bold** type, or *italics* to emphasize important points. Boxes can also be used for emphasis.

Example:

In this publication, we use boxes to summarize the key points in a chapter.

3. Avoid underlining or using bold, italics, or all capital letters for large sections of text.

<u>Underlined</u>, **bold**, or *italic* type can be useful to emphasize a few words. However, we do not recommend them for several lines of text. Long stretches printed in these styles are harder to read than normal type. They slow the reader down.

Use all capital letters only for very short headlines. CAPITAL LETTERS ARE HARD TO READ IN LARGE BLOCKS OF TEXT BECAUSE EACH LETTER HAS NEARLY THE SAME HEIGHT AND SHAPE. Letters with different heights and shapes are much easier to read.

In this publication, we avoid printing entire sentences in capital letters. We use **bold** type to draw attention to key points or headings.

4. Use wide margins.

Be sure to include plenty of white space (margins) at each side of your text. Wide margins make reading easier on the eye. With wide margins, the text column is narrower and the eye does not have to travel as far.

In this publication, we keep our text to a width of five inches. We use a left margin of 1.25 inches and a right margin of 2.25 inches. The left margin is justified; the right margin is not. It's easier for readers to keep their place when the text has an uneven margin.

Illustration Tips

1. Use illustrations to help explain your text.

Graphics, drawings, or photos should be used only if they will help readers understand the text. Do not assume that an illustration will convey a clear message by itself. Provide clearly written text to accompany the graphic.

In this publication, we use illustrations to help explain our written message.

Example:

Clearly identify who you are, why you are there and the organization you represent.



2. Use simple line drawings.

Illustrations should be simple and free of any clutter that could distract from the message. Avoid heavily shaded drawings, abstract drawings, "stick" figures, silhouettes and drawings with busy backgrounds. You may need to find an artist who specializes in line drawings.

Example:

Poor illustration



Better illustration



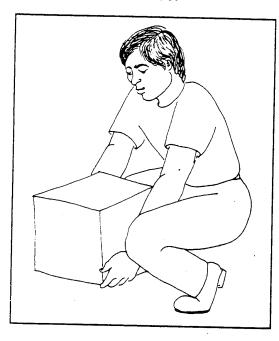
3. Illustrate the correct way to do things.

People who rely on pictures for explanation will often assume that a picture represents what is correct. If a picture shows someone lifting an object, for example, many people will assume that is the right way to lift.

If you use an illustration as an example of what **not** to do, indicate this with a large X or Ø. Make sure any symbol you use is recognized by your audience.

Example:

Correct:



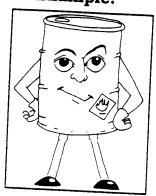
Incorrect:



4. Avoid cartoon figures.

Many publications use cartoon figures to help explain their text. Inanimate objects such as a barrel may "come to life" when hands, feet, or a face is added. Cartoons can complicate a message by introducing an irrelevant figure. They can be seen as insulting or may not be recognized by your audience.

Example:

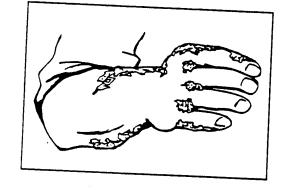


5. Show as much of the human body as you can.

Try to draw enough of the body to be sure people can recognize what is shown. For example, when showing a rash, avoid showing just an arm, leg, or hand.

Example:

Arm



Body



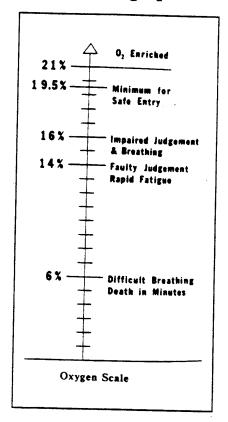
continued

6. Avoid abstract graphs or charts.

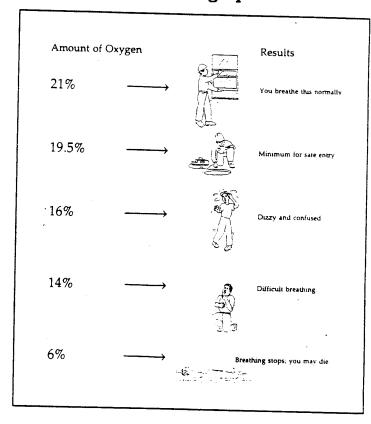
Look for ways to present graphs or charts in a more pictorial style. Talk with your audience to find out if they understand a graph before including it in your text. The following example was shown to a group of workers. It was redrawn based on their feedback.

Example:

Abstract graph



Pictorial graph



To Sum Up:

Writing Tips

- Base the content on the workers' most important needs.
- Establish your priority message.
- Organize your text into short, logical sections.
- Use words that are easy to understand.
- Define technical terms.
- Keep sentences short and simple.
- Use a conversational style and active voice.

Design Tips

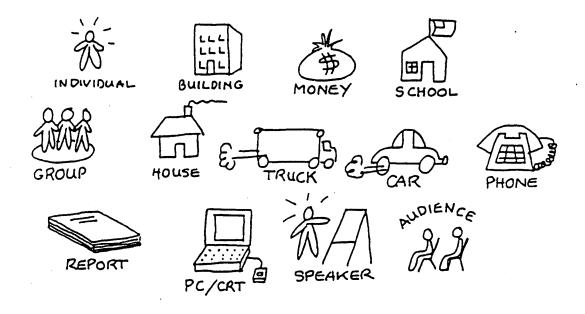
- Use large type and a serif typeface for the text.
- Emphasize important points by using underlining, bold type, italics, or boxes.
- Avoid underlining, bold type, italics, or all capitals for large sections of text.
- Use wide margins.

Illustration Tips

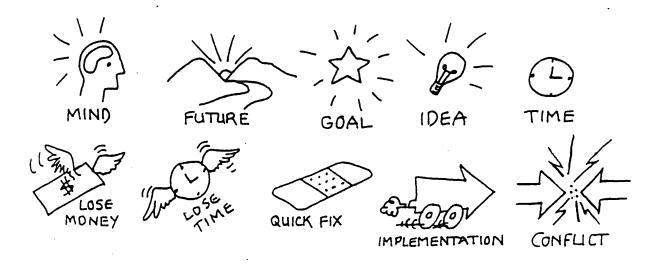
- Use illustrations to help explain your text.
- Use simple line drawings.
- Illustrate the correct way to do things, not the wrong way.
- Avoid cartoon figures.
- Show as much of the human body as you can.
- Avoid abstract graphs or charts.

EXAMPLES of stick figures, basic shapes, and symbols to represent people, things, and ideas.

PICTOGRAPHS...Add Your Own!



IDEOGRAPHS...Add Your Own!



After David Sibbet & Geoff Ball.

"There is no requirement to obtain special permission for such uses as educational/training activities." from The Facilitator's Toolkit: Tools and Techniques for Techniques for Generating Ideas and Marketing Decissions in Groups, by Lynn Kearny 7-22

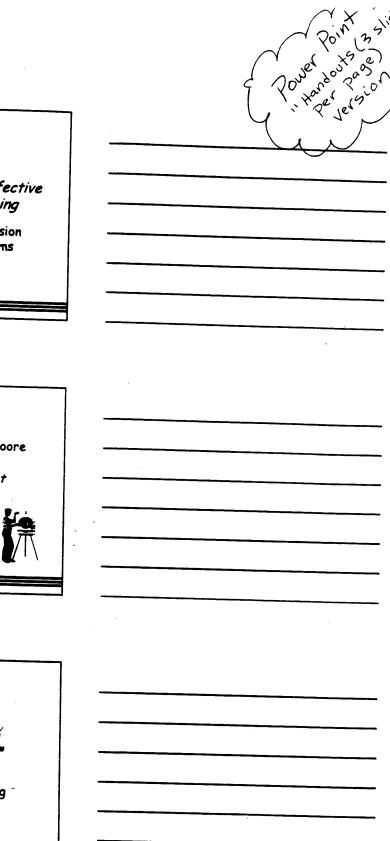
Designing and Delivering Effective Health and Safety Training UC Davis University Extension Environmental Management Program Technologies • Instructor - Carina Celesia Moore A quick tour of presentation technologies using Power Point Use of the Internet Agenda Overview Considerations Hardware Software • Telephone and Videoconferencing Concluding Remarks Additional Resources 🔳 Overview • Tremendous leaps in Presentation Technology field Creating visual aids and presentations has never been easier What presentation technology methods are familiar to you? Considerations Consider adult learning principles Analyze your audience Match the medium to the message Maintain conceptual framework of a well-designed lesson plan Consider your skills, interest, budget, time Hardware Computers Printers CD-ROM players Scanners Monitors Projection devices - (overhead projector, VCR, slide projector, LCD "data plate", video projector, etc.) Software Word processing software Presentation software

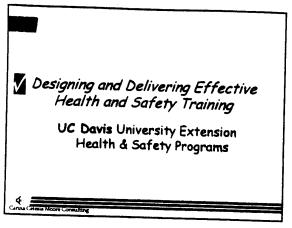
Graphic software

- Internet connections
- What software is familiar to you?
- 8 3 Telephone and Videoconferencing
 - Immediate interaction and feedback
 - "The next best thing"
 - Cost savings
 - Time savings
 - Team work
 - What are your experiences?
- 9 Concluding Remarks
 - Become familiar with the various presentation technology methods currently available
 - Watch for "new technologies"
 - Remember, K.I.S.S.
 - Experiment, practice, evaluate, have fun!
 - Additional Resources

10

- Other training sessions
- Books, articles, the Internet
- Consulting services, colleagues, Jr. H.S. students!





Presentation Technologies

- Instructor Carina Celesia Moore
- A quick tour of presentation technologies using Power Point
- Use of the Internet

Canna Celeria Moore Consulting

Agenda

- Overview
- Considerations
- Hardware
- Software
- Telephone & Videoconferencing
- Additional Resources
- Concluding Remarks

Criesia Moore Consulting

Overview

- Tremendous growth
- Continuous simplification
- Growing audience expectations
- Your experiences?



Considerations

- Consider adult learning principles
- Analyze audience
- Match medium to message
- Create conceptual framework for effective "lesson plan"
- Consider *resources* (skills, interest, budget, time)

Hardware

- Computers
- CD-ROM players
- Scanners
- Monitors
- Projection devices
 - overhead projector
 - VCR, slide projector
 - LCD "data plate"
 - video projector





Software

- Word processing software
- Presentation software
- Graphic software
- Internet connections
- Your experiences?



4nna Celesia Moore Consultir

Telephone & Videoconferencing

- Immediate interaction, feedback
- "The next best thing"
- Cost savings
- Time savings
- Team work
- Your experiences?



Q Comp

Additional Resources

- Other training sessions
- "Shrink wrap" technique
- Books, articles, Internet
- Consulting services, colleagues
- Kids!



Carina Celesia Moose Consulta

• Jump in! • Stay current! • Remember K.I.S.S.! • Experiment, practice, evaluate! • Have fun!

Designing and Delivering Effective Health and Safety Training

THE ART OF DELIVERING PRESENTATIONS

 Behavioral Skills that Facilitate Effective Interpersonal Communication

9 Behavioral Skills to Effective Interpersonal Communication

- Solid eye communication.
 - Good posture.
- Natural gestures.
- Appropriate dress and appearance.
- Voice and vocal variety.
- Effective use of language and pauses.
- Active listener involvement.
- Effective use of humor.
- Be your natural self.

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Six Steps to Prepare for a Presentation
Training Methods That Work
Crisp Publication
1200 Hamilton Court, Menlo Park, CA 94025
Pages: 45-47

Author: Lois B Hart

Contact Person: Coleen Jones (206-340-1933)

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Exercises in Awareness and Skill Development
The art of Communicating: Achieving Interpersonal Impact in Business
Crisp Publication
1200 Hamilton Court, Menlo Park, CA 94025
Pages: 77-79

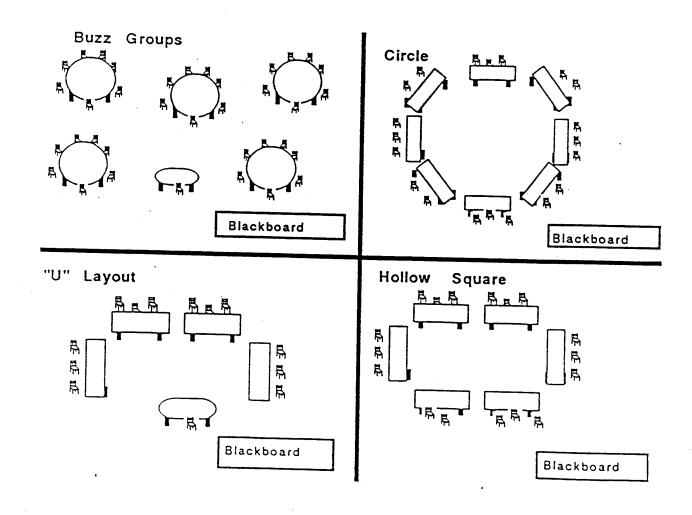
Author: Bert Decker Contact Person: Coleen Jones (206-340-1933)

ROOM ARRANGEMENT

Here are several suggestions that will make your group comfortable and will create a climate conducive to learning.

- 1. A room with movable chairs and tables is important so that they can be grouped.
- 2. Plenty of light and ventilation in the room is important.
- 3. For each session, you should have a blackboard, eraser, and chalk handy.
- 4. Check to see that the room can be darkened and that a motion picture projector (overhead, slide projector), screen, and extension cord are available.

LAYOUTS THAT IMPROVE LEARNING



Meeting Planner's Guide



Use this worksheet to plan your next meeting, educational program or conference. It will help you remember details and to re-check arrangements with your on-site conference center planner before your program begins.

	p Information:	Contact Information:				
Prog	gram/Group Name:	Corporate Coordinator:				
Prog	gram Date(s):	On-Site Contact For Corporate:				
Num	ber Of Participants:	The Contact's Arrival Time To Site:				
Part	icipants' Arrival Time:	Conterence Center Planner:Planner's Phone & Fax:				
Part	icipants' Departure Time:					
Num	ber Of Participants Staying Overnight.					
Num	ber Of Participants Commuting To Site:	Billing Information:				
r3	2.1. 1.f	Name:				
	itator Information:	Address:				
Mail	e(s):	Phone:				
Dhor	ress(es):	FAX.				
Fav	ne Number(s):	— Conference Rooms:				
Anni	Number(s):	Conference Rooms:	Conformaco Boom/o\s			
Den:	al Date(s):arture Date(s):	Number of Seats Required in the	Conference Room(s): Breakout Room(s):			
очр	a un c bacc(3).	Conference Rooms/Portions 0				
			reas:			
		resident ve holestonisk v	TCAS.			
Desi	red seating style:					
	A: Theater: Accommodates about 60.					
	Ideal for lecture situations.	A				
	B: Classroom: Accommodates about 50.		•			
_	Ideal for learning situations that require work space.					
	nica in reaning situations that require work space.		•			
	•	• • • •	• • • • • • •			
	C: Herringbone: Accommodates about 50. Ideal for learning situations that require work space.					
•						
	D: U-Shaped (or Horseshoe): Accommodates 30 to 50.	В				
	Ideal for board meetings and idea exchange, and best					
	for AV presentations.		•			
			• •			
П	E: Hollow Square: Accommodates about 40.		••			
	ldeal for idea exchange.		• • • • • •			
			• 🗔			
	F: Conference Style: Accommodates small groups of up		• •			
_	to about 24. Ideal for board meetings and idea exchange.		_ : :			
	रू कार्यार दन: मिटला मा म्यवाच मास्ट्रसाक्ष्य वाच मास्व दरामावाह्नद	C _ L				
		- •\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\				
, Pur	lividual conference center rooms may vary by size,		•			
	theck with the conference planner for maximum capacity of rooms.	••>				
JU 1	nost man are control circo picenice for michalinain caption; of footies.		• •			

Audiovisual: Items needed & how many: Items needed needed Items needed ne	1/2" VHS camera 1/2" VHS player/reco 3/4" VHS player/reco 16mm projector 35mm projector Opaque projector Overhead projector wit Easel Laser pointer Camcorder	order
Other Equipment Needs: Podium Copy machine Computers Fax machine Special signs Videotape	☐ High stool ☐ Transparencies ☐ Printers ☐ Telephone ☐ Audiocassettes ☐ Extension cords	
Meeting Material Needs: Marking pens Name badges Handouts: Source: Visuals: Source:	□ Note pads and penci □ Name place cards Quantity: Quantity:	•
Overnight Accommodations: Number of Guest Rooms:		
Special Needs of Guests:		nallenged
Amenities: For All Guests: Food & Beverage Service: Morning: Time:	_ For VIPs:	-
Amenities: For All Guests: Food & Beverage Service:	For VIPs: Full-service menu Sit-down ests:	□ Coffee/tea only □ On own
Amerities: For All Guests: Food & Beverage Service: Morning: Time: Continental breakfast Lunch: Time: Buffet Special Dietary Needs of Gue Diabetic Vegetarian Dinner: Time: Menu Wine with dinns Special Dietary Needs of Gue Diabetic Vegetarian	For VIPs: Full-service menu Sit-down ests: Low Sodium (house or special label) ests:	□ Coffee/tea only □ On own Other
Amenities: For All Guests: Food & Beverage Service: Morning: Time: Continental breakfast Lunch: Time: Buffet Special Dietary Needs of Gue Diabetic Vegetarian Dinner: Time: Menu Wine with dinners Special Dietary Needs of Gue Diabetic Vegetarian Breaks: A.M. Time: Coffee/tea Juice	For VIPs: For VIPs: Full-service menu Sit-down ests: Low Sodium er (house or special label) ests: Low Sodium	□ Coffee/tea only □ On own Other
Amerities: For All Guests: Food & Beverage Service: Morning: Time: Continental breakfast Lunch: Time: Buffet Special Dietary Needs of Gue Diabetic Vegetarian Dinner: Time: Menu Wine with dinn: Special Dietary Needs of Gue Diabetic Vegetarian Breaks: A.M. Time: Coffee/tea Juice Breaks: P.M. Time: Coffee/tea Soft drint Cocktail Reception: Time:	For VIPs: Full-service menu Sit-down ests: Low Sodium er (house or special label) ests: Low Sodium Soft drinks Snacks	☐ Coffee/tea only ☐ On own Other
Amerities: For All Guests: Food & Beverage Service: Morning: Time: Continental breakfast Lunch: Time: Buffet Special Dietary Needs of Gue Diabetic Vegetarian Dinner: Time: Menu Wine with dinn Special Dietary Needs of Gue Diabetic Vegetarian Breaks: A.M. Time: Coffee/tea Juice Breaks: P.M. Time:	For VIPs: Full-service menu Sit-down ests: Low Sodium er (house or special label) ests: Low Sodium Soft drinks Snacks	☐ Coffee/tea only ☐ On own Other
Amenities: For All Guests: For All Guests: Food & Beverage Service: Morning: Time: Continental breakfast Lunch: Time: Buffet Special Dietary Needs of Gue Diabetic Vegetarian Dinner: Time: Menu Wine with dinner: Freaks: A.M. Time: Coffee/tea Juice Breaks: P.M. Time: Coffee/tea Soft drint Cocktail Reception: Time: Open bar Cosh bar Hors d'oeuvres	For VIPs: Full-service menu Sit-down ests: Low Sodium er (house or special label) ests: Low Sodium Soft drinks Snacks	Coffee/tea only On own Other Other

Designing and Delivering Effective Health and Safety Training

Effective Performance as a Trainer - Feedback Form

Trainer Characteristics	Performance			Example Illustrating Effective Performance as a Trainer
	Excellent	Good	Needs Improvement	
Training Design Skills				
Knows audience; considers adult learning principles				
Defines objectives				
Sequences objectives from simple to complex				······································
Uses instructional methods & visual aids suited to objectives				
Presentation Skills				
Presents instructional content in organized manner				
Involves learners in instructional process				
Uses training aids and audio-visuals effectively				
Speaks effectively; holds audience attention			,	

Lesson Plan Presentations

∃Set-up and Framing (5 minutes)

□Delivery (20 minutes)

JWrite feedback (5 minutes)

1Deliver feedback (15 minutes)

LEARNER-CENTERED EDUCATION: A CHECKLIST FOR CAC INSTRUCTORS

YES	NO		
		Ass	sessment/Identification of Training Needs
		1.	Has instructor/program identified specific training needs for these students?
		Ide	ntification of Training Goals/Objectives
		2.	Does instructor review objectives with class at beginning of session?
			velopment of Learning Activities/Methods of truction
		3.	Is instructor using a well-written, participatory Lesson Plan?
		4.	Does the Lesson Plan contain clear, measurable objectives that encourage students to discuss, apply, and evaluate the information being taught?
		<u>Imp</u>	lementation of Training
		5.	Does instructor use adult education teaching principles – remembering that we retain the most information when we see it, hear it, discuss it and practice using it (90 percent remembered if we combine these four learning methods!)?
		6.	Does instructor use a variety of teaching methods (discussion, small group activity, hands-on) that involve students in working together to apply the information being taught?
		7.	Does instructor build in an opportunity for students to talk about how they'll apply this information back at their own worksite to improve health and safety on the job?

	8.	Does instructor allow for discussion of challenges that may come up in applying information/making changes back at the worksite?
	9.	Does instructor establish learning environment that is respectful of range of experiences among students, and encourage students to share those experiences throughout session?
	10.	Does instructor set up 3 way learning environment – teacher with student, student with student, student with teacher?
	11.	Does instructor use participatory methods that allow for analysis and evaluation of the subject matter – so it's not just involving the class in learning knowledge through a participatory activity (like a game or case study), but engaging them in thinking about new ways to utilize the information?
	12.	Does instructor encourage students to compare the pros and cons of different ways (individual action, group action) they might use the information to improve safety at their worksite, and the impact those different choices might have?
	13.	Does instructor use well-written, visually appealing materials?
	14,	Does instructor reference binder materials/handouts throughout session?
	Eval	<u>luation</u>
	15.	Does instructor use methods to help him/her determine if students are learning/retaining the key information we are presenting?
	Upd	ate/Improvement of Program
D	16.	Is there a system for instructor to give suggestions back to Program Coordinator for improvement of program?
	17.	Is this feedback opportunity used?

FACILITATOR COMPETENCIES

(From Edges, published by ICA - Canada)

- The Facilitator is effective in using core methods (distinguishes process from content)
- The Facilitator carefully manages the client relationship and prepares thoroughly (scoping)
- The Facilitator uses time and space intentionally
- The Facilitator is skillful in evoking participation and creativity
- The Facilitator is practiced in honoring the group and affirming its wisdom
- The Facilitator is capable of maintaining objectivity
- The Facilitator is skilled in reading the underlying dynamics of the group
- The Facilitator orchestrates the event drama
- The Facilitator releases blocks to the process
- The Facilitator is adroit in adapting to the changing situation
- The Facilitator assumes responsibility for the group journey
- The Facilitator can produce powerful documentation
- The Facilitator demonstrates professionalism, self-confidence and authenticity
- The Facilitator maintains personal integrity

CHARACTERISTICS OF THE FACILITATOR

(From the Institute of Cultural Affairs)

One who is willing to commit to a style of:

- "asking" rather than "telling"
- paying personal compliments
- willing to spend time in building relationships rather than being always task-
- initiating conversation rather than waiting for someone else to
- asking for other's opinions rather than always having to offer their own
- negotiating rather than dictating decision-making
- listening without interrupting
- emoting but able to be restrained when the situation requires it
- drawing energy from outside themselves rather than from within
- basing decisions upon intuitions rather than having to have facts
- has sufficient self-confidence that they can look someone in the eye when talking to them
- more persuasive than sequential
- more enthusiastic than systematic
- more outgoing than serious
- more like a coach than a scientist
- more like a counselor than a sergeant
- is naturally curious about people, things and life in general
- can keep the big picture in mind while working on the nitty-gritty

Designing and Delivering Effective Health and Safety Training

TRAINING EVALUATION

- * Review: Learner-Centered Training Model ©
- The Art of Giving and Receiving Feedback
- The Four Levels of Evaluation
- Examples of Evaluation Forms

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Learner-Centered Training Model Author: Carina Celesia Moore

Contact Person: Carina Celesia Moore (ccmoore@ucdavis.edu (530) 752-9681)

Giving and Receiving Feedback The Art of

whether our training had the intended Constructive feedback helps us decide effect.

Giving Feedback

- First positive, then opportunities for improvement.
- Give specific behaviors
- Use "I" statements

Receiving Feedback

- Not "personal"
- Avoid getting defensive
- Let us know when it's "enough"

The Four Levels of Training Evaluation

■ Level 1 - Reaction

- Measure of customer satisfaction.
- "Smile sheet".

■ Level 2 - Learning

 The extent to which participants change attitudes, improve knowledge, and/or increase skill as a result of attending the training program.

■ Level 3 - Behavior

 The extent to which change in behavior has occurred because the participant attended the training program.

■ Level 4 - Results

- The final results that occurred because the participants attended the training program. The final results can include increased production, improved quality, decreased costs, reduced frequency and/or severity of accidents, increased sales, reduced turnover, and higher profits and return on investment (ROI).
- Business impact.

(Adapted from Kirkpatrick, Donald L., 1994. <u>Evaluating Training Programs -- The Four Levels</u>. Berrett-Koehler Publishers. pp. 18, 21-26.)

Designing and Delivering Effective Health and Safety Training

Effective Performance as a Trainer - Feedback Form

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Presentation Skills				
Presents instructional content in organized manner				
Involves learners in instructional process	·			
Uses training aids and audio-visuals effectively		*********		
Speaks effectively; holds audience attention				***************************************

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The Art of Feedback Principles
The 1989 Annual: Developing Human Resources
Pfeiffer/ Wiley
Contact Person: Copyright Clearance Center (CCC.com)

Giving Objective Behavioral Feedback

One of the most important aspects of giving feedback is keeping it objective and behavioral. This kind of feedback can provide learning opportunities for both the sender and the receiver. The sender can learn more about observing human behavior while the receiver can become more aware of what he/she does and how he/she does it.

To develop better techniques for giving feedback, it is necessary to understand some specific aspects of the process. Following is a brief description of some factors that may assist you in giving feedback. This list is not intended to be all encompassing but to serve as a basic starting point.

Focus feedback on behavior rather than the person

During feedback sessions, it is important that you refer to what a person did during the observation rather than on what you imagined the person to be. This focus on behavior further implies the use of adverbs (which relate to actions taken) rather than adjectives (which relate to qualities) when referring to the person observed. Thus, one might say "this person talked considerably (approximately 40% of the time) during the exercise" rather than "this person talks too much." Talking in terms of personality characteristics implies inherited constant qualities difficult, if not impossible, to change. Focusing on behavior implies that it is something related to the specific situation observed that might be changed. It is less threatening to a person to hear comments on behavior rather than on traits.

Focus feedback on observations rather than inferences

Observations refer to what you saw or heard in the behavior of the person you are observing, while inferences refer to interpretations and conclusions that were made from what you saw or heard. These latter aspects can be best addressed when discussing a person's development needs and suggestions. In a sense, inferences or conclusions about a person can contaminate observations, thus clouding the feedback for another person. When inferences and conclusions are shared, they should be identified and separated from observations.

Focus on description rather than judgment

The effort of describing implies the process of reporting what took place during the observation, while judgment implies evaluation in terms of good and bad, or, right or wrong. Judgments arise out of the personal frame of reference of one's values, whereas descriptions represent neutral reporting (to the extent possible).

Another important aspect of description is the terminology selected. The "more or less" words imply a continuum on which any behavior may fall, stressing quantity, which is objective and somewhat measurable, rather than quality, which is subjective and judgmental.

Focus feedback on behavior to specific situations

Feedback is generally more useful if it can be tied to specific observations and events. By tying it to time and place, we can increase our understanding of behavior. Therefore, it is extremely important that you accurately document what happened in the observation prior to the feedback session.

Focus feedback on the sharing of ideas and information

Sharing ideas and information implies leaving the person receiving the feedback free to decide for herself/himself, in light of personal goals, how to use the ideas and the information. If you approach the situation through advice giving, you could be perceived as telling the person what to do with the information. In this sense, you could take away the person's personal freedom to determine what is most appropriate for himself/herself.

The more that you can focus on a variety of procedures and means for the attainment of developmental goals, the less likely the person you are giving feedback to would be to prematurely accept a specific suggestion -- which may or may not fit his/her developmental need.

Finally, it is extremely helpful to stress the **what**, **how**, **when**, and **where** of what is being reported as observable characteristics.

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Testing for Results
Developing Instructional Design
Pages: 70-71
Author: Geru McAdle
Crisp Publication

Contact Person: Coleen Jones (206-340-1933)

FEEDBACK AND EVALUATION FORMS

Jotting down brief notes about participant involvement throughout the presentation can prove valuable later when discussing a participant's progress. Also, the notes you keep can provide accurate information on specific behaviors and skills that the participants' exhibit.

Your attention to detailed information during the presentation can give you data on the content and process of the training so that you can give managers a specific progress report, rather than just general impressions of the whole group.

Consider the evaluation process as an ongoing process, which you should conduct prior to and during the program. It is important for you to evaluate each step of your design and delivery to make sure you have met your individual teaching objectives.

Here are parts of the process that can be critical to a successful transfer of knowledge to your audience:

NEED—The participants, their manager(s) and co-workers come to the conclusion that the training was necessary.

GROUP MIX—The appropriate people attended the program. In other words, the right prerequisites and shared vocabulary were used. Also, comparable opportunities were available to apply the training following the program.

SCHEDULE—It was optimal for learning and on-the-job integration.

OPPORTUNITY—Participants had both the time and the opportunity for on-the-job application immediately after the training.

FEEDBACK—The success of on-the-job application of the training, as well as the program itself is communicated to the organization.

CHECKLIST: Factors you should review during your presentation:
Did I find at least two friendly faces?
Did I maintain some eye contact with almost everyone?
☐ Did I check for audience understanding?
Did I clarify points that seemed "fuzzy"?
Did I answer questions appropriately?
Did the exercise(s) emphasize an appropriate teaching point?
Did the presentation meet my established teaching and learning objectives?
Did the audience achieve an acceptable level of understanding?

DISCUSSION/FEEDBACK FORM

 ne of Learning Activity
What are some of the things you liked most about this learning activity?
Were the purpose and objectives for the activity clear to you?
What are some limitations to using this method?
Do you have suggestions for revising this activity to make it
more learner/ centered
more participatory and/ or
more relevant for trainees?

5.	Are there other ways you recommend this activity be revised?
6,	
	Do you think this learning activity could lead to workers making changes in their workplaces?
7.	How might you use or adapt this activity for other topics or courses?

Violence in the Workplace: From Prevention to Intervention

 3. 4. 	The presentation provided a balance between theory and application. I will be able to apply the workshop content to my job. The handouts were valuable.	5 5 5	4	3	2	1 .
3.	The handouts were valuable.	_	4	3		
	The handouts were valuable.	_	4	2		
		5		•	2	·1
4.	The total	5	4	3	2	1
	The instructor was effective in style and delivery.	5	4	3	2	1
5.	The instructor stimulated interest and discussion questions.	5	4	3		_
5.	Tuesda and a	J	7	3	2	1
·	I would recommend the Safety & Security Series to my colleagues.	5	4	3	2	1
omme	ents:					
	Safety &					

Course Title: Instructor(s): Date:

			e mos	t appr	opriate re	esponse
	Strong Agree	gly		S	trongly isagree	Not Applicable
Course						
The stated course objectives were met.	5	4	3	2	1	NA
The course was valuable ; I will apply what I learned on the job.	5	4	3	2	1	NA
The course content and sequence were well organized.	5	4	3	2	1	NA
The course level was appropriate for my understanding.	5	4	3	2	1	NA
The overall length of the course was appropriate.	5	4	3	2	1	NA
There was a balance between presentation, discussion, and exercises.	5	4	3	2	1	NA
The handouts were useful.	5	4	3	2	1	NA
I plan to use the handouts on the job.	5	4	3	2	1	NA
Instructor/Facilitator						
The instructor was an effective presenter/facilitator .	5	4	3	2	1	NA
The instructor was well prepared and organized.	5	4	3	2	1	NA
The instructor was knowledgeable in the subject matter.	5	4	3	2	1	NA
Overall Evaluation						
I would recommend this course to my colleagues.	T	Yes			_No	
Why (or why not)?	ı					
What I liked best about the course (strengths): What I liked least about the course (weaknesses):						
I recommend the following additions , deletions or changes to the cours Why did you choose to attend this course? (Check any that apply)						
Enhance on-the-job performanceSupervisor recommendation	·	Profes	sional g	rowth	opportunit	у
Approved in Individual Development Plan (IDP)Other (spec	ify)					
Comments (continue on reverse side, if necessary):						
Optional						
Name:	epartmen	t:			***************************************	
	ob function					
Email:	ampus rol	a (circl	۵)، ۱	Staff	Faculty	Other

CALIFORNIA-ARIZONA CONSORTIUM **COURSE EVALUATION**

Training Agency: University Extension, UC Davis

011HSX117 Your evaluation of this program can help us improve future training programs and teaching methods.

Date:

Cour Inst	se Title: CALIFO	RNIA-ARIZONA CONSC arina Celesia Moore	ORTIUM TRAI	NER SEMINAR			
1.	How helpfu	l do you think this ti	raining course will (Circle	be for you in the	ne following areas:		
			<u>Not Vo</u> <u>Helpfu</u>	ery Some	ewhat	<u>Quite</u> <u>Helpful</u>	Very <u>Helpfu</u>
(a)	principles ne literary issue	ng adult learning eds assessment, adult s, handling problem d evaluating training.		(2)	(3)	(4)	(5)
(b)	Developing l	earning objectives	(1)	(2)	(3)	(4)	(5)
(c)	Small Group	ctional methods such a Activity (SGAM), g, facilitated discussion	` ,	(2)	(3)	(4)	(5)
(d)	Creating visu	al aids	(1)	(2)	(3)	(4)	(5)
(e)		g how to make your ram interactive and	(1)	(2)	(3)	(4)	(5)
(f)		ve presentation delive niques	ery (1)	(2)	(3)	(4)	(5)
2.	Overall, how	useful is this trainin	ng course for you i	n your work?			
	(1) Not at all Useful	(2) Slightly Useful	(3) Useful	(4) Quite Useful	(5) Very Useful		
3.	Was the mate	erial covered in this	course easy to und	lerstand?			
	(1) Too easy	(2) Easy	(3) About Right	(4) Hard	(5) Too Hard		
4.	Would you re	ecommend this train	ing course to othe	rs within your c	company/agency/union?	· ?	
	(1) Yes	(2) No	(3) N/A	•	•		
	Why or Why	Not?					

Please also complete questions on back of this page.

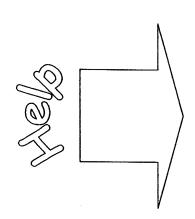
5. How would you rate the teaching methods used in this course?

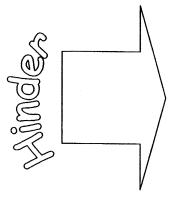
		Circi	e one that applies	3		
	<u>Not</u> <u>Hel</u>	<u>Very</u> pful	Somewhat Helpful	Helpful	<u>Quite</u> <u>Helpful</u>	Ī
(a)	Participatory Lectures/					
	Discussion (1)		(2)	(3)	(4)	
(b)	interactive exercises (1)		(2)	(3)	(4)	
W	hat part of the course did you find m	ost helpfu	il?			
						-
WI	hat recommendations do you have to	improve	the course?			
						-
	nat is your job title?					
	nat is your job title?tructor(s)					
Ins			agree 2	3		 Agree
Ins	tructor(s)	Dis	agree			
Ins	tructor(s) Were prepared and organized Displayed a clear understanding	Dis .	agree 2	3	4	
Ins 1. 2.	tructor(s) Were prepared and organized Displayed a clear understanding of the subject matter	Dis .	2 2	3	4	
Ins 1. 2.	tructor(s) Were prepared and organized Displayed a clear understanding of the subject matter Showed enthusiasm for subject matter	1 1 1	2 2 2	3 3 3	4 4	
Ins 1. 2. 3.	Were prepared and organized Displayed a clear understanding of the subject matter Showed enthusiasm for subject matter Presented content clearly Stimulated interest and discussion	1 1 1 1	2 2 2 2 2 2	3 3 3 3	4 4 4	
Ins 1. 2. 3.	Were prepared and organized Displayed a clear understanding of the subject matter Showed enthusiasm for subject matter Presented content clearly	1 1 1 1	2 2 2 2 2 2	3 3 3 3	4 4 4	
Ins 1. 2. 3.	Were prepared and organized Displayed a clear understanding of the subject matter Showed enthusiasm for subject matter Presented content clearly Stimulated interest and discussion	1 1 1 1	2 2 2 2 2 2	3 3 3 3	4 4 4	Agree

Help/Hinder

that HELPED your learning and those that ♦ Spontaneously brainstorm all the factors HINDERED your learning

chart pad (some factors may be on BOTH Chart responses on appropriate side of a sides)





Designing Interactive Training

Suggested Readings

- 101 Ways to Make Training Active by Melvin L. Silberman. Josey-Bass, 1995.
- Active Training A Handbook of Techniques, Designs, Case Examples, and Tips 2nd Edition by Mel Silberman. Josey-Bass, 1998.
- Delivering Effective Training Sessions by Geri McArdle. Crisp Publications, 1993
- Evaluating Training Programs The Four Levels 2nd Edition by Donald Kirkpatrick. Berret-Koehler Publishers, 1998.
- Graphics for Presenters by Lynn Kearny. Crisp Publications, 1996.
- More Needs Assessments Instruments, John Wilcox Editor. American Society for Training and Development, 1994.
- Return on Investment in Training and Performance Improvement Programs by Jack Phillips. Gulf Publishing, 1997.
- The Art of Communication: Achieving Interpersonal Impact in Business by Bert Decker. Crisp Publications, 1997.
- The Trainers Tool Kit by Cyril Charney & Kathy Conway. Amacon, 1997.
- Training Methods That Work by Lois Hart. Crisp Publications, 1991.

Designing and Delivering Effective Health & Safety Training

Appendix Course Handout Materials

Literacy Quiz

This short quiz will give you an idea of what you already know about literacy. We also hope that it will provide you with additional information about how issues of literacy may apply in health and safety settings. Please circle the correct answer for each question.

- 1. The percentage of adults in the United States that have difficulties with basic literacy tasks is:
- a. 6% (about 11 million)
- b. 17% (about 32 million)
- c. 48% (about 90 million)
- 2. The reading level of most educational materials that people receive at their jobs is often:
- a. between 6th 8th grade reading level
- b. between 9th 12th grade reading level
- c. at college reading level
- 3. Material Safety Data Sheets (MSDSs) are often written at a:
- a. 8th grade reading level
- b. 10th grade reading level
- c. college reading level
- 4. What are some factors contributing to adults having reading and writing difficulties?
- a. environmental factors
- b. psychological factors
- c. educational factors
- d. physical factors
- e. all of the above
- 5. True or False. Grade-level measurements are an accurate way to assess people's literacy skills.
- a. True
- b. False

Answers to Quiz

1. The percentage of adults in the United States that have difficulties with basic literacy tasks is:

Answer: (c) 48% (about 90 million). According to the National Adult Literacy Survey, completed in 1993, almost half the adult population have difficulties with basic literacy tasks. These tasks range from the ability to read a bus schedule to making out a bank deposit slip. (Adult Literacy in America, 1993)

2. The reading level of most educational materials that people receive at their jobs is often:

Answer: (b) between 9th - 12th grade reading level. A 1987 study cited in the Business Council for Effective Literacy Bulletin found that 70% of reading material on job sites is between a 9th and 12th grade reading level. The result is that a large percentage of the written information available at the worksite cannot be read and easily understood by a significant number of employees.

3. Material Safety Data Sheets (MSDSs) are often written at a:

Answer: (c) college reading level. In a report to the Occupational Safety and Health Administration, researchers at the University of Maryland documented that MSDSs are written at a college level and that over one-third of workers surveyed did not comprehend crucial health and safety information presented on the MSDSs. (J.T. Kearny, American Journal of Industrial Medicine, 1993)

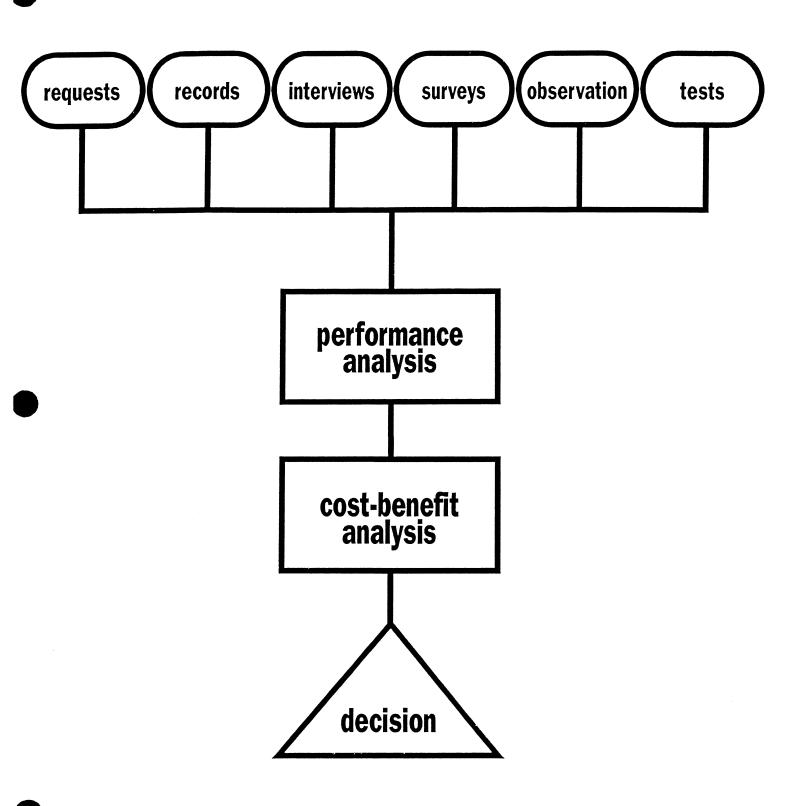
4. What are some factors contributing to adults having reading and writing difficulties?

Answer: (e) all of the above

Environmental Factors: The home environment of a young person may be demanding, without the necessary support or time for learning to read. Economic, employment and social issues may impact families and affect the learning environment.

Psychological Factors: Some poor readers have a history of frustration, trauma, and failure when it comes to reading. Some people who are poor readers develop skills and defense mechanisms for managing in work,

Training Needs Analysis





Learning Styles Checklist:

Directions: Place a number by each statement to reflect how it describes you. Capture you first response, don't ponder each question. Then, total each section's score.

3 = m	ost like me	2 = somewhat like me	1 = not like me
	I often see clear v	visual images when I close my e	yes or think about something.
	I am sensitive to	color.	_
	I enjoy jigsaw pu	zzles, mazes, and other visual pu	ızzles.
		r image how something might ap y above (a bird's-eye view).	opear if it were looked down
	= my tota	l visual score	
	I like working wi	th my hands at concrete activitie	es.
	•	en come to me when I'm out for ome other kind of physical activi	
	I need to touch th	ings in order to learn more abou	t them.
	I need to practice	a new skill rather than simply re	ead or see a video about it.
	= my tota	al kinesthetic score	
	I get more out of	listening to the radio or spoken	word than I do from TV or film
****	I can hear words	in my head before I read, speak,	or write them down.
-	I enjoy entertaini puns.	ng myself or others with tongue	twisters, nonsense rhymes, or
	I like to talk thro	ugh a problem.	
	= my tota	al auditory score	

TRAINING FOR ACTION Tips for Developing a Training Plan

- 1. Develop clear, measurable objectives. There are four types of objectives:
 - Knowledge objectives list the type of knowledge participants will gain during the session. (Example: "...will be able to list three routes of entry for chemical hazards.")
 - Behavioral objectives focus on desired skills and competencies that participants will acquire. (Example: "...will demonstrate the steps involved in cleaning and storing a respirator.")
 - Attitude objectives try to impact participants' attitudes, values and beliefs. (Example: "...will recognize how their own values and beliefs impact their opinions about unions.")
 - Social action objectives emphasize collective actions for change rather than individual behavior change. (Example: "...will commit to working with their department to make one change to improve systems of safety at their workplace.")
- 2. Develop one or two key points that you will want to make sure to emphasize several times during your training session.
- 3. Pick training methods that will work well with your topic, involve participants and allow them to:
 Share their experiences and knowledge about the topic.
 Discuss and apply the information.
 Analyze the information, their own experiences and their values related to this topic.
 - □ Talk about how they can or cannot apply this information back at the workplace to improve health and safety (support and barriers).
- 4. Consider your audience: think about language, literacy and workplace culture issues.
- 5. Come up with at least two open-ended questions you can ask the group that would help you "transform" your session into a Training For Action session.

Designing and Delivering Effective Health and Safety Training

Effective Performance as a Trainer - Feedback Form

Trainer Characteristics	Performance			rertormance			Example Illustrating Effective Performance as a Trainer
	Excellent	Good	Needs Improvement				
Training Design Skills							
Knows audience; considers adult learning principles							
Defines objectives							
Sequences objectives from simple to complex							
Uses instructional methods & visual aids suited to objectives		## ## ## ## ## ## ## ## ## ##					
Presentation Skills							
Presents instructional content in organized manner							
Involves learners in instructional process							
Uses training aids and audio-visuals effectively							
Speaks effectively; holds			,	·			

BRAINTEASERS (I.Q. Tests)

OBJECTIVE:

To be used to introduce any session on creativity, problem-solving, or

related topic.

To be used as a "just for fun" or a "change of pace" activity.

PROCEDURE:

Hand out copies of any of the following "IQ Tests" (page 95-133, with

answers). Suggest that each block represents a well-known phrase or

saying.

MATERIALS

REQUIRED:

Handout sheets for each person or small group.

APPROXIMATE

TIME REQUIRED: 5-10 minutes.

SOURCE:

Varied.

I.Q. TEST

Here are some real puzzlers for you! Decipher the hidden meaning of each set of words.

I Q FGH JKLMNOP RST	2 EILNPU	PLASMA H ₂ 0	4 NOSIT
5 NOXQQIVIT	arrest you're	7 RUINS RUINS RUINS RUINS RUINS LOVE RUINS RUINS RUINS	8 PICT RES
9 L NCH L NCH	10	PISTANCE	P NOANO Y
13 cy cy	B ILL ED	POLMOMICE	16 HIGH CLOUDS CLOUDS CLOUDS CLOUDS CLOUDS

ANSWERS

- 1. High IQ
- 2. Line up
- 3. Blood is thicker than water
- 4. Mixed emotions
- 5. No excuse for it
- 6. You're under arrest
- 7. Love among the ruins
- 8. You ought to be in pictures
- 9. Take you out to lunch
- 10. Petifores
- 11. Distance running
- 12. Pay through the nose
- 13. Cyclones
- 14. Sick in bed
- 15. Mother-in-law
- 16. High above the clouds

I.Q. TEST

Here are some real puzzlers for you! Decipher the hidden meaning of each set of words.

U S T	STROKES! STROKES STROKES	3 SOMETHING	4 KJUSTK
5 N S	6 W A L G K	you just me	8MAP
9 FISHING	GET IT GET IT GET IT GET IT	more it it thani	VAD ERS
i.e. •	GOLDEN GATE H ₂ Q	WAY PASS	END N D

ANSWERS

- 1. It's up to you
- 2. Different Strokes
- 3. The start of something big
- 4. Just in case
- 5. Fouled up
- 6. Jay walking
- 7. Just between you and me
- 8. Time's up
- 9. Deep sea fishing
- 10. Forget it
- 11. More to it than meets the eye
- 12. Space invaders
- 13. That is beside the point
- 14. Water under the bridge
- 15. Highway overpass
- 16. Making ends meet